Delaware Register of Regulations

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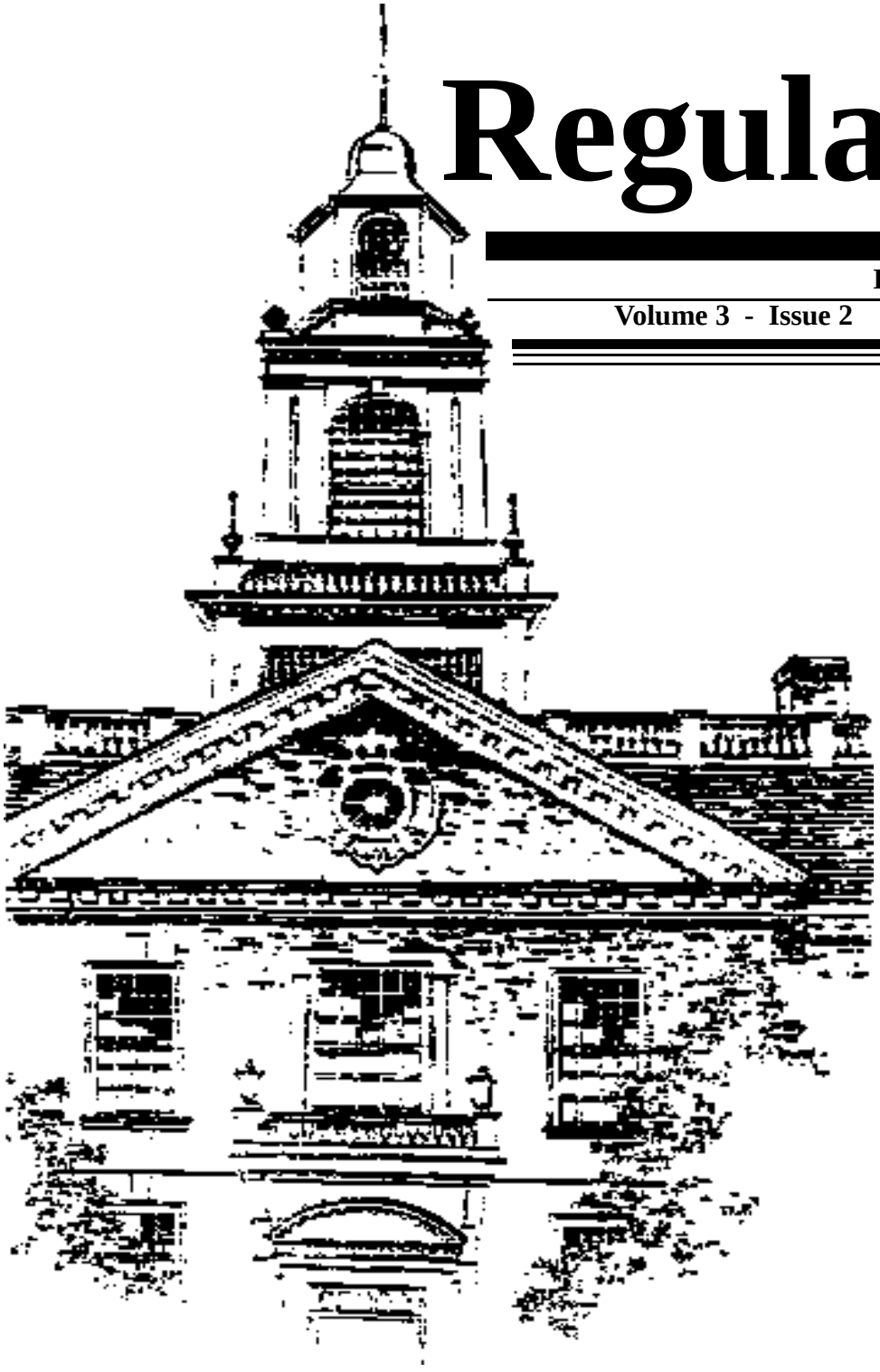

IN THIS ISSUE:

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 July 15, 1999.

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The Delaware Register will publish any regulations that are proposed to be adopted, amended or repealed and any emergency regulations promulgated.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and other interested parties may participate in the process by which administrative regulations are adopted, amended or repealed, and may initiate the process by which the validity and applicability of regulations is determined.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file notice and full text of such proposals, together with copies of the existing regulation being adopted, amended or repealed, with the Registrar for publication in the Register of Regulations pursuant to §1134 of this title.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

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
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.
JANUARY 1	DECEMBER 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.

PROPOSED

DELAWARE STATE FIRE PREVENTION COMMISSION

DEPARTMENT OF FINANCE
DIVISION OF REVENUE
DELAWARE STATE LOTTERY OFFICE

DEPARTMENT OF HEALTH AND SOCIAL SERVICES
DIVISION OF SOCIAL SERVICES

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

DIVISION OF WATER RESOURCES

FINAL

DEPARTMENT OF ADMINISTRATIVE SERVICES
MERIT EMPLOYEE RELATIONS BOARD

DEPARTMENT OF AGRICULTURE

DEPARTMENT OF HEALTH AND SOCIAL SERVICES
DIVISION OF PUBLIC HEALTH
OFFICE OF DRINKING WATER

DIVISION OF SOCIAL SERVICES

DEPARTMENT OF INSURANCE

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF FISH AND WILDLIFE

DIVISION OF WATER RESOURCES

GOVERNOR

GENERAL NOTICES

DELAWARE RIVER BASIN COMMISSION

CALENDAR OF EVENTS/HEARING NOTICES

The table printed below lists the regulations that have been proposed, adopted, amended or repealed in the preceding issues of the current volume of the Delaware Register of Regulations.

The regulations are listed alphabetically by the promulgating agency, followed by a citation to that issue of the Register in which the regulation was published. Proposed regulations are designated with (Prop.); Final regulations are designated with (Final); Emergency regulations are designated with (Emer.); and regulations that have been repealed are designated with (Rep.).

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.

DELAWARE STATE FIRE PREVENTION COMMISSION

Statutory Authority: 16 Delaware Code, Section 6603 (16 **Del.C.** 6603)

NOTICE OF PUBLIC HEARING

The Delaware State Fire Prevention Commission will hold a hearing pursuant to 16 Del. C. §6603 and 29 Del. C. Ch. 101, to receive public comment regarding a proposed change to the State Fire Prevention Regulations. The Commission is proposing to amend the Ambulance Service Regulations as follows:

Add BLS Ambulance Provider/First Responder Section.

DATE, TIME AND PLACE OF PUBLIC HEARING

DATE: Tuesday, September 21, 1999
TIME: 9:00 AM and 7:00 PM
PLACE: Commission Chamber Delaware State Fire School
Delaware Fire Service Center, 1463 Chestnut
Grove Road, Dover, Delaware 19904

Persons may view the proposed addition to the Regulations between the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday, at the Delaware State Fire Prevention Commission Office, Delaware Fire Service Center, 1463 Chestnut Grove Road, Dover, Delaware, 19904.

Persons may present their views in writing by mailing their views to the Commission at the above address prior to the hearing or by offering testimony at the public hearing. If the number of persons desiring to testify at the public hearing is large, the amount of time allotted to each speaker will be limited.

ADDENDUM TO THE AMBULANCE SERVICE REGULATIONS OF THE STATE FIRE PREVENTION COMMISSION
BLS AMBULANCE PROVIDER/FIRST RESPONDER
1999

I. DEFINITIONS

1. For the purpose of this policy the following definitions are used.

2. State Fire Prevention Commission – The State Governing Body mandated in Title 16, Delaware Code whom Regulates the Basic Life Support System in Delaware.

3. Delaware Emergency Medical Technician – Basic/ Ambulance Attendant – The individual as defined in Title 16 of Delaware code who provides patient care on an ambulance and has completed the National Department of Transportation curriculum and initially certified as a National Registered and Delaware Emergency Medical Technician-Basic and upon recertification chooses to meet only the state requirements.

4. National Registry of Emergency Medical Technicians – The nationally recognized organization for the testing and registering of persons who have completed a

DOT, EMT-Basic course.

5. National Department of Transportation – **Emergency Medical Technician Curriculum:** A curriculum developed and adopted by the Federal Government as a recommended guide for people providing emergency care in the field.

6. National Registered Emergency Medical Technician – Basic – a person who completed the DOT curriculum and passes the National Registry of Emergency Medical Technicians Examination.

7. Office of Emergency Medical Services – The State Agency Mandated in Title 16 that serves as the designated representative of the NREMT; provides medical advise and direction; regulates the statewide automatic external defibrillator program; and coordinates data collection activities for the EMS system.

8. Certification – An initial authorization to practice the skills of an EMT-Basic specifying that the individual has successfully completed and passed the approved curriculum and evaluation instruments.

9. Recertification Training – A defined curriculum that once completed allows the individual to continue practicing as an EMT-B for a specific period of time.

10. AED Certification – Semi-Automatic External Defibrillation Training and Certification as recognized by the Delaware board of Medical Practice.

11. First Responder – An individual who has to take the First Responder Course as provided by the Delaware State Fire School.

12. First Responder Curriculum – The United States Department of Transportation National Standard Curriculum for First Responders.

13. Cardiopulmonary Resuscitation CPR – A combination of chest compressions and rescue breathing used during cardiac and respiratory arrest to keep oxygenated blood flowing to the brain. (AHA Manual)

14. Cardiopulmonary Resuscitation CPR - A combination of chest compressions and rescue breathing used during cardiac and respiratory arrest to keep oxygenated blood flowing to the brain.

15. NREMT – The National Registry of Emergency Medical Technicians.

16. DOT- United States Department of Transportation

17. Refresher – A course of instruction authorized by the DOT respectively for EMT-B or First Responders that prepare the ambulance provider for recertification by the DFPC or the NREMT.

18. EMT-B – Emergency Medical Technician – Basic

19. DSFS – Delaware State Fire School

20. OEMS – Office of Emergency Medical Services, Division of Public Health.

21. DFPC – The Delaware Fire Prevention Commission

22. EMT-B – Bridge Course – A state-approved course of instruction that upon successful completion entitles the provider to sit for the NREMT-B examination.

II. TRAINING STANDARD

Effective June 16, 1998, the current of United States Department of Transportation Emergency Medical Technician – Basic National Standard Curriculum shall be the curriculum adopted for the Ambulance Attendants in the State of Delaware.

III. TRAINING CERTIFICATION

All individuals who successfully complete initial EMT-B training or a bridge course shall be eligible for and must successfully pass the NREMT examination to receive Delaware EMT-B certification.

IV. EFFECTIVE DATE OF IMPLEMENTATION

January 1, 2002 all ambulance attendants who provide patient care and ride in the patient care compartment shall be Emergency Medical Technicians – Basic.

V. ELIGIBILITY FOR CERTIFICATION

A. Apply to the Delaware State Fire Prevention Commission on the approved application form:

B. An individual may apply for and receive certification as an Ambulance Attendant provided that.

1. They are a member in good standing of a Delaware Fire Department, an Ambulance Organization, a Private Ambulance Provider or any other group, business or industry certified by the Delaware State Fire Prevention Commission to provide ambulance service.

2. They have obtained registration from the NREMT.

3. The Chief, CEO, or head of the respective organization signs the application.

VI. CERTIFICATION

A. Every individual who successfully completes the National Registry of Emergency Medical Technician-Basic certification will receive registration for the time period to coincide with the NREMT registration cycle. This is typically a two-year period. Individuals will be issued a Delaware EMT-B certification upon successful completion of initial or bridge course and the NREMT registration process.

B. During the Implementation phase from January 1, 1998 to December 31, 2001 initial NREMT-B certification may be obtained in one of two ways:

1. Complete a full Emergency Medical Technician Basic course as offered by a member of the Prehospital Education Consortium of Delaware or other recognized training program and passes the National Registry of Emergency Medical Technicians examination.

Prerequisites

a. Must be 18 years or older

b. Healthcare Provider CPR

c. AED Certification

2. Complete an Emergency Medical Technician Bridge course offered by a member of the Prehospital Education Consortium of Delaware or other recognized training program and passes the National Registry of Emergency Medical Technicians examination.

Prerequisites

a. Must possess current ambulance attendant or Emergency Care Technician certification.

b. CPR/AED

c. Must be 18 years old or older

C. After 2001 certification will be obtained by completing a state approved EMT-B Course and passing the National Registry of Emergency Medical Technicians Exam.

D. The Bridge Course will be offered only during implementation which ends December 31, 2001.

VII. RECERTIFICATION

A. Individuals will be recertified for a two-year period.

B. All individuals initially receive both a State and NREMT-B Certification. After the first two years, the department or the individual may:

1. Reregister with the NREMT. The provider will be recertified as both a Delaware EMT-B and NREMT-B.

2. Recertify as a Delaware EMT-B.

C. The registration requirements for a National Registry of Emergency Medical Technicians – Basic will be determined by the National Registry of Emergency Medical Technicians.

D. The recertification requirements for a Delaware EMT-B will be determined by the Delaware State Fire Prevention Commission, with recommendations of their medical advisor/director.

VIII. CONTINUING EDUCATION REQUIREMENTS

A. Requirements for continuing education will be determined by the authority having jurisdiction over type and quantity of Continuing Education required.

B. Special Requirements:

1. Continuing education classes to achieve re-registration through the NREMT will be reviewed for approval by the OEMS in accordance with NREMT policy and procedure.

2. Delaware Continuing Education classes will be approved by the State Fire Prevention Commission with recommendation of their Medical Advisor/Director.

IX. DECERTIFICATION

A. An Ambulance attendant will lose their Delaware EMT-B Certification to provide patient care if:

1. They do not meet the required continuing education requirements as defined by the State Fire Prevention Commission.

2. Certification is revoked by the State Fire Prevention Commission following procedures and in compliance with Delaware fire Service Standards.

B. National Registry of Emergency Medical Technicians will revoke certification based upon their national policy. If an individual has their certification revoked by the National Registry of Emergency Medical Technicians the State Fire Prevention Commission may also revoke their Delaware EMT-B Certification.

X. EXPIRED CERTIFICATIONS

A. Maintain state EMT-B certification, but NREMT-B lapsed and wish to regain NREMT-B.

1. Attends DOT EMT-B refresher as specified by National Registry of Emergency Medical Technicians

2. Pass DOT EMT-B Practical Exam

3. Pass National Registry of Emergency Medical Technicians Written Exam

B. Both state EMT-B certificaion and NREMT-B lapsed beyond two years

1. Attend EMT-B course and pass the National Registry of Emergency Medical Technicians exam

2. CPR/AED – Current Certification.

C. Both state EMT-B certification and NREMT-B lapsed less than two years

1. DOT EMT-B Refresher

2. CPR/AED Current

3. National Registry of Emergency Medical Technicians/State Practical Exam

4. National Registry of Emergency Medical Technicians written exam.

XI. TESTING PROCEEDURES

Initial testing and retesting for National Registered EMT-B and National Registered First Responders will follow the guidelines set forth by the National Registry of Medical Technicians.

XII. RECIPROCITY

A. EMT's who enter Delaware with prior Emergency Medical Services Training will receive reciprocity in the Delaware System provided that.

1. They become a member of a certified ambulance service provider.

2. They have a current National Registry EMT-B certification.

A. Submit request for reciprocity

B. CPR and AED as approved in Delaware

C. Challenge four (4) practical exams

3. They have a current EMT-B certification from another state

A. Certification less than 2 years and practical less than 12 months

1. State approved practical exam
2. National Registry written exam

B. Certification greater than two years and practical greater than 12 months

1. State Practical/National Registry exam
2. Complete DOT EMT-B Refresher
3. National Registry written exam
4. State Approved AED & CPR Certification

4. They submit the required application form to the State Fire Prevention Commission.

B. PARAMEDICS

They hold a current certification and/or license specified below

1. National Registered Emergency Medical Technician-Paramedic
   A. Submit request for reciprocity
   B. Must produce current cards AED/CPR
   C. Letter from affiliate
2. Emergency Medical Technician-Paramedic from another state
   A. Challenge National Registry exam at the basic or Paramedic level
   B. Must take DOT refresher at the level they are challenging written exam

C. REGISTERED NURSE

1. Registered Nurse or higher with current Ambulance Attendant Certification
   A. DOT EMT-B Refresher
   B. National Registry/State approved practical exam
   C. CPR/AED
   D. NREMT-B exam
   E. Letter from affiliate
2. Registered Nurse or higher with no prior EMS training.
   A. CPR/AED
   B. EMT-B course
   C. State approved practical
   D. National Registry written exam

D. PHYSICIANS WITH DELAWARE LICENSE

1. CPR/AED
2. State approved practical exam
3. National Registry Written exam
4. Letter from affiliate

E. PHYSICIANS WITHOUT DELAWARE LICENSE

1. CPR/AED
2. EMT-B course National Registry State approved practical
3. National Registry Written exam
4. Letter from affiliate

F. The State Fire Prevention Commission reserves the right to administer a written examination if deemed necessary.

G. The State Fire Prevention Commission will grant reciprocity with recommendations from their Medical Advisor/Director.

XIII. REPORTING

A. Every individual who operates as an ambulance attendant and provides patient care will:

1. Ensure that the State mandated EMS Run paper on computer data report is submitted to ambulance agency for forwarding to the proper collection agency and the receiving health care facility. Failure to comply with data submission will result in loss of ambulance attendant certification.
2. Submit any other data to the designated agencies as required by the State Fire Prevention Commission.

XIV. FIRST RESPONDER

A. Individuals who successfully complete the Delaware State Fire School First Responder Course will be certified as same by the Delaware State Fire Prevention Commission for a period of two years.

First Responder Criteria

1. CPR/AED Prerequisites
2. Must be 16 years old or older

B. National Registry First Responder Certification is optional

C. Individuals who have maintained their Ambulance Attendant Certification until December 31, 2001 but do not become an Emergency Medical Technician Basic will be certified as a First Responder.

D. A First Responder may provide initial on scene care in the following situations.

1. Initial on scene care as contained in the First Responder curriculum.
2. Semi Automatic External Defibrillation if holding an AED card.
3. Cardiopulmonary Resuscitation (CPR)

E. The First Responder may not provide transport of a patient without an EMT-B or higher present.

F. First Responders can participate as a member of an ambulance crew with an EMT-B providing Patient Care.

G. Must re certify as mandated by the State Fire Prevention Commission to maintain First Responder Status.

1. DOT First Responder Refresher, AED & CPR
2. National Registry – As determined by National Registry

H. May have their certification revoked by the State Fire Prevention Commission in compliance with Delaware Fire Service Standards.

I. Reciprocity for First Responders from other states must submit request for reciprocity, uptain CPR/AED as approved in Delaware, and challenge two practicals.

XV. Expired First Responder Cards CERTIFICATIONS

A. State First Responder card lapsed Less than two (2) years

1. Refresher as specified by State Fire Prevention Commission
2. DOT First Responder Refresher
3. Current CPR & AED

B. Maintain State First Responder, but national Registry First Responder lapsed

1. Refresher with practical evolutions as specified by National Registry
2. National Registry First Responder written exam

C. State First Responder and National registry First Responder lapsed within two years

1. DOT First Responder Refresher
2. State approved practical
3. National Registry First Responder exam

D. State First Responder and National Registry First Responder lapsed greater than 2 years: Must take entire First Responder Course

DEPARTMENT OF FINANCE

DIVISION OF REVENUE

DELAWARE STATE LOTTERY OFFICE

Statutory Authority: 29 Delaware Code, Section 4805(a) (29 **Del.C.** 4805(a))

The Delaware State Lottery Office proposes to amend Delaware Lottery Rule 23 regarding the payment of prizes in the Lottery's Powerball game. The rule merely tracks a recent change in the operation of the Powerball game for the payment of prizes. The Lottery will receive written public comments from August 1, 1999 through August 30, 1999. Comments should be sent to Wayne Lemons, Director-Delaware Lottery, 1575 McKee Road, Suite 102, Dover, DE 19904-1903. Copies of the proposed rule can be obtained from the Lottery office at that address.

(23) Payment of Prizes

(a) All prizes shall be paid within a reasonable time after they are awarded and after the claims are verified by the Director. For each prize requiring annual payments, all payments after the first payment shall be made on the anniversary date of the first payment in accordance with the type of prize awarded. The Director may, at any time, delay any payment in order to review a change of circumstances relative to the prize awarded, the payee, the claim, or any other matter that may have come to his attention. All delayed payments will be brought up to date immediately upon the Director's confirmation and continue to be paid on each original anniversary date.

(b) For Grand Prizes in the Lottery's Powerball game, those prizes shall be paid at the election of the player made no later than 60 days after the player becomes entitled to the prize with either a per winner annuity or cash payment. If the payment election is not made at the time of purchase and is not made by the player within 60 days after the player becomes entitled to the prize, then the prize shall be paid as an annuity prize. An election for an annuity payment made by a player before ticket purchase or by system default or design may be changed to a cash payment at the election of the player until the expiration of 60 days after the player becomes entitled to the prize. The election to take the cash payment may be made at the time of the prize claim or within 60 days after the player becomes entitled to the prize. An election made after the winner becomes entitled to the prize is final and cannot be revoked, withdrawn or otherwise changed. Shares of the Grand Prize shall be determined by dividing the cash available in the Grand Prize pool equally among all winners of the Grand Prize. Winner(s) who elected a cash payment shall be paid their share(s) in a single cash payment. The annuitized option prize shall be determined in accordance with the rules and procedures approved by the Multi-State Lottery Association, of which the Delaware Lottery is a participating member. Neither the Multi-State Lottery Association nor the member lotteries including the Delaware Lottery shall be responsible or liable for changes in the advertised or estimated annuity prize amount and the actual amount purchased after the prize payment method is actually known to the Multi-State Lottery Association. In certain instances announced by the Multi-State Lottery Association Product Group, the Grand Prize shall be a guaranteed amount and shall be determined pursuant to MUSL rules and procedures. If individual shares of the cash held to fund an annuity is less than $250,000, the MUSL Product Group, in its sole discretion, may elect to pay the winners their share of the cash held in the Grand Prize pool. All annuitized prizes shall be paid annually in twenty-five equal payments with the initial payment being made in cash, to be followed by twenty-four payments funded by the annuity.

DEPARTMENT OF HEALTH AND SOCIAL SERVICES

DIVISION OF SOCIAL SERVICES

Statutory Authority: 31 Delaware Code, Section 505 (31 Del.C. 505)

PUBLIC NOTICE

Medicaid / Medical Assistance Program

In compliance with the State's Administrative Procedures Act (APA - Title 29, Chapter 101 of the Delaware Code) and with 42CFR §447.205, and under the authority of Title 31 of the Delaware Code, Chapter 5, Section 505, the Delaware Department of Health and Social Services (DHSS) / Division of Social Services / Medicaid Program is amending its independent laboratory manual.

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, Medical Assistance Programs, Division of Social Services, P.O. Box 906, New Castle, DE 19720 by August 31, 1999.

REVISION:

Independent Laboratory Provider Manual

I. GENERAL INFORMATION

All tests performed by an independent laboratory must be documented in the patient's medical record by a written order from the ordering practitioner. ~~The signing of the practitioner's name by another individual or the use of facsimiles are not acceptable.~~ ~~Any tele~~ Phoned-in orders for laboratory test~~ings~~s must be followed with a written order within 30 days. ~~supported by a signed order from the practitioner.~~

An independent laboratory may use a reference laboratory to perform a test for which the independent lab is not certified.

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:

THE DELAWARE ON-ROAD MOBILE SOURCE EMISSIONS BUDGETS FOR THE DELAWARE PHASE II ATTAINMENT DEMONSTRATION: An Addendum to The Delaware Phase II Attainment Demonstration For The Philadelphia-Wilmington-Trenton Ozone Nonattainment Area

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

In May 1998 the Delaware Department of Natural Resources and Environmental Control (DNREC) submitted to the U.S. Environmental Protection Agency (EPA) a document entitled "The Delaware Phase II Attainment Demonstration for Philadelphia-Wilmington-Trenton Ozone Nonattainment Area" ("The Phase II document"). The Phase II document successfully demonstrated attainment of the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for the Delaware portion of the Philadelphia-Wilmington-Trenton ozone nonattainment area (NAA). Kent and New Castle counties are the two Delaware severe ozone nonattainment counties for which the modeled attainment demonstration is required by the 1990 Clean Air Act Amendments (CAAA). The attainment year for the severe ozone Philadelphia-Wilmington-Trenton NAA is year 2005. The Phase II document listed all the control measures utilized in the attainment demonstration, but did not list the on-road mobile source emissions budgets for the purposes of transportation conformity. Therefore, this addendum assigns the on-road mobile source emissions budgets for the Kent and New Castle county severe ozone NAA.

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:

August 26, 1999, 6:00 pm; DNREC Auditorium; 89 Kings Highway; Dover, DE 19901

7. PREPARED BY:

Alfred R. Deramo, Program Manager (302) 739-4791
Mohammed A. Mazeed, Environmental Engineer (302) 739-4791, July 13, 1999

The Delaware On-Road Mobile Source Emissions Budgets For The Delaware Phase II Attainment Demonstration

An Addedum To
The Delaware Phase II Attainment Demonstration for the Philadelphia-Wilmington-Trenton Ozone Nonattainment Area
May 1998

Submitted by
State of Delaware
Department of Natural Resources and Environmental Control
Division of Air and Waste Management
Air Quality Management Section

In Conjunction With
The Delaware Department of Transportation

July 1999

In May 1998 the Delaware Department of Natural Resources and Environmental Control (DNREC) submitted to the U.S. Environmental Protection Agency (EPA) a document entitled "The Delaware Phase II Attainment Demonstration for Philadelphia-Wilmington-Trenton Ozone Nonattainment Area" ("The Phase II document"). The Phase II document successfully demonstrated attainment of the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for the Delaware portion of the Philadelphia-Wilmington-Trenton ozone nonattainment area (NAA). Kent and New Castle counties are the two Delaware severe ozone nonattainment counties for which the modeled attainment demonstration is required by the 1990 Clean Air Act Amendments (CAAA). The attainment year for the severe ozone Philadelphia-Wilmington-Trenton NAA is year 2005. The Phase II document listed all the control measures utilized in the attainment demonstration, but did not list the on-road mobile source emissions budgets for the purposes of transportation conformity. Therefore, this addendum assigns the on-road mobile source emissions budgets for the Kent and New Castle county severe ozone NAA.

Phase II On-Road Mobile Source Emissions Budgets

The Phase II document demonstrated attainment of the 1-hour ozone standard in Delaware's portion of the Philadelphia-Wilmington-Trenton NAA for the July 18-20, 1991 episode with OTAG Strategy Run2 boundary conditions. Since the modeled attainment test is for the attainment year 2005, DNREC developed the ozone precursor emissions, i.e., volatile organic compound (VOC) and oxides of nitrogen (NOx), for the point, stationary area, off-road and on-road mobile source categories by projecting the 1990 baseline emissions of each source category to year 2005. The projected emissions have all the mandated controls from the CAAA, controls from Delaware's rate-of-progress plans, and any other known national, regional and local controls. Since on-road mobile source emissions are temperature dependent, the July 18, 19 and 20, 2005 emissions were based on July 18, 19 and 20, 1991 temperatures, respectively. Of these three days, on-road mobile source emissions on July 20th were the highest. Since Delaware demonstrated attainment on all three days, Delaware chooses the emissions from July 20th for setting the on-road mobile source emissions budgets. The VOC and NOx budgets for each county are summarized in Table 1.

Table 1. On-Road Mobile Source Emissions Budgets for Year 2005
in Tons per Peak Ozone Season Day (TPD)

County	VOC Emissions	NOx Emissions
Kent	5.76	9.60
New Castle	16.93	27.07
Total Nonattainment	**22.69**	**36.67**

Therefore, for the purposes of transportation conformity, the year 2005 VOC and NOx emissions budgets for Kent County are 5.76 TPD and 9.60 TPD, respectively, and for New Castle County, the year 2005 VOC and NOx emissions budgets are 16.93 TPD and 27.07 TPD, respectively.

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 39 - NOx Budget Trading Program

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

The ambient air in Delaware does not meet the national ambient air quality standard (NAAQS) for the pollutant ozone. It has been determined that NOx, a pollutant that contributes to the formation of ozone, must be reduced in order for Delaware to support its Rate of Progress Plan and ozone attainment demonstration. The Department is herein finalizing a new regulation that requires boilers and indirect heat exchangers rated at 250 MMBTU/hr, or greater, heat input and electric generating units with an electrical output rating of 15 MW, or greater, to meet NOx emissions cap limitations that collectively reflect substantial reductions in NOx emissions. To aid industry in making the necessary reductions in a more cost effective manner, the regulation includes provisions that facilitate compliance through participation in a regional cap and trade program administered by the USEPA.

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: A public hearing on this regulation will be held on Tuesday, August 31, 1999, at 6:00 P.M. in the DNREC Auditorium, Richardson and Robbins Building, 89 Kings Highway, Dover, Delaware.

7. PREPARED BY:
Robert Clausen (302) 323-4542, July 14, 1999

Regulation 39 - NOx Budget Trading Program
Proposed Regulation
July 12, 1999

Section 1 - General Provisions

a. The purpose of this regulation is to reduce nitrogen oxides (NOx) *emissions* in Delaware, in support of Delaware-s rate of progress plan and ozone attainment demonstration, by establishing a *NOx Budget Trading Program* in the State of Delaware.

b. Unless otherwise stated, any time period scheduled, under the *NOx Budget Trading Program*, to begin on the occurrence of an act or event shall begin on the day the act or event occurs.

c. Unless otherwise stated, any time period scheduled, under the *NOx Budget Trading Program*, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.

d. Unless otherwise stated, if the final day of any time period, under the *NOx Budget Trading Program*, falls on a weekend or a *State* or Federal holiday, the time period shall be extended to the next business day.

e. Permit Requirements

1. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of each *NOx Budget source* required to have a federally enforceable permit and each *NOx Budget unit* required to have a federally enforceable permit at the *source* shall:

i. *Submit* to the *Department* a complete *NOx Budget permit* application in accordance with the provisions and deadlines specified in Section 7 of this regulation.

ii. *Submit* in a timely manner any supplemental information that the *Department* determines is necessary in order to review a *NOx Budget permit* application and issue or deny a *NOx Budget permit*.

2. The *owner*s and *operator*s of each *NOx Budget source* required to have a federally enforceable permit and each *NOx Budget unit* required to have a federally enforceable permit at the *source* shall have a *NOx Budget permit* issued by the *Department* and operate the *unit* in compliance with such *NOx Budget permit*.

3. The *owner*s and *operator*s of a *NOx Budget source* that is not otherwise required to have a federally enforceable permit are not required to *submit* a *NOx Budget permit* application, and to have a *NOx Budget permit*, under Section 7 of this regulation for such *NOx Budget source*.

f. Monitoring requirements.

1. The *owner*s and *operator*s and, to the extent applicable, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of each *NOx Budget source* and each *NOx Budget unit* at the *source* shall comply with the monitoring requirements of Section 14 of this regulation.

2. The *emissions* measurements recorded and

reported in accordance with Section 14 of this regulation shall be used to determine compliance by the *unit* with the *NOx Budget Trading Program emissions* limitation under Section 1(g) of this regulation.

g. Nitrogen oxides requirements

1. The *owner*s and *operator*s of each *NOx Budget source* and each *NOx Budget unit* at the *source* shall *hold NOx allowances* available for compliance deductions under Section 11 of this regulation, as of the *NOx allowance transfer deadline* of each *control period*, in the *unit*'s *compliance account* and the *source*'s *overdraft account* in an amount not less than the total NOx *emissions* for the *control period* from the *unit*, as determined in accordance with Section 14 of this regulation.

2. Each *ton* of nitrogen oxides emitted in excess of the *NOx Budget emissions limitation* shall constitute a separate violation of this regulation, the *CAA*, and applicable *State* law.

3. A *NOx Budget unit* shall be subject to the requirements under Section 1(g)(1) of this regulation starting on the later of May 1, 2003 or the date on which the *unit* commences operation.

4. *NOx allowance*s shall be held in, deducted from, or transferred among *NOx Allowance Tracking System account*s in accordance with Sections 9, 10, 11, 12, 13, 15, and 16 of this regulation.

5. A *NOx allowance* shall not be deducted, in order to comply with the requirements under Section 1(g)(1) of this regulation, for a *control period* in a year prior to the year for which the *NOx allowance* was *allocated*.

6. A *NOx allowance allocated* by the *Department* or the *Administrator* under the *NOx Budget Trading Program* is a limited authorization to emit one *ton* of nitrogen oxides in accordance with the *NOx Budget Trading Program*. No provision of the *NOx Budget Trading Program*, the *NOx Budget permit* application, the *NOx Budget permit*, or an exemption under Section 2 of this regulation and no provision of law shall be construed to limit the authority of the United States or the *State* to terminate or limit such authorization.

7. A *NOx allowance allocated* by the *Department* or the *Administrator* under the *NOx Budget Trading Program* does not constitute a property right.

8. Upon *recordation* by the *Administrator* under Sections 9, 10, 11, 12, 13, 15, or 16 of this regulation, every *allocation*, transfer, or deduction of a *NOx allowance* to or from a *NOx Budget unit*'s *compliance account* or the *overdraft account* of the *source* where the *unit* is located is deemed to amend automatically, and become a part of, any *NOx Budget permit* of the *NOx Budget unit* by operation of law without any further review.

h. The *owner*s and *operator*s of a *NOx Budget unit* that has *excess emissions* in any *control period* shall:

1. Surrender the *NOx allowance*s required for deduction under Section 16 of this regulation; and

2. Pay any fine, penalty, or assessment or comply with any other remedy imposed under Section 16 of this regulation.

i. Liability

1. Any person who knowingly violates any requirement or prohibition of the *NOx Budget Trading Program*, a *NOx Budget permit*, or an exemption under Section 2 of this regulation shall be subject to enforcement pursuant to applicable *State* or Federal law.

2. Any person who knowingly makes a false material statement in any record, submission, or report under the *NOx Budget Trading Program* shall be subject to criminal enforcement pursuant to the applicable *State* or Federal law.

3. No permit revision shall excuse any violation of the requirements of the *NOx Budget Trading Program* that occurs prior to the date that the revision takes effect.

4. Each *NOx Budget source* and each *NOx Budget unit* shall meet the requirements of the *NOx Budget Trading Program*.

5. Any provision of the *NOx Budget Trading Program* that applies to a *NOx Budget source* (including a provision applicable to the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget source*) shall also apply to the *owner*s and *operator*s of such *source* and of the *NOx Budget unit*s at the *source*.

6. Any provision of the *NOx Budget Trading Program* that applies to a *NOx Budget unit* (including a provision applicable to the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget unit*) shall also apply to the *owner*s and *operator*s of such *unit*. Except with regard to the requirements applicable to *unit*s with a *common stack* under Section 14 of this regulation, the *owner*s and *operator*s and the *NOx authorized account representative* or the alternate *NOx authorized account representative* of one *NOx Budget unit* shall not be liable for any violation by any other *NOx Budget unit* of which they are not *owner*s or *operator*s or the *NOx authorized account representative* or the alternate *NOx authorized account representative* and that is located at a *source* of which they are not *owner*s or *operator*s or the *NOx authorized account representative* or the alternate *NOx authorized account representative*.

j. Monitoring and Reporting

1. Unless otherwise provided, the *owner*s and *operator*s of the *NOx Budget source* and each *NOx Budget unit* at the *source* shall keep on site at the *source* each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the *Department* or the *Administrator.*

i. The *account certificate of representation*

for the *NOx authorized account representative* or the alternate *NOx authorized account representative* for the *source* and each *NOx Budget unit* at the *source* and all documents that demonstrate the truth of the statements in the *account certificate of representation*, in accordance with Section 6 of this regulation; provided that the certificate and documents shall be retained on site at the *source* beyond such 5-year period until such documents are superseded because of the submission of a new *account certificate of representation* changing the *NOx authorized account representative* or the alternate *NOx authorized account representative*.

ii. All *emissions* monitoring information, in accordance with Section 14 of this regulation; provided that to the extent that Section 14 of this regulation provides for a 3-year period for recordkeeping, the 3-year period shall apply.

iii. Copies of all reports, *compliance certification*s, and other submissions and all records made or required under the *NOx Budget Trading Program*.

iv. Copies of all documents used to complete a *NOx Budget permit* application and any other submission under the *NOx Budget Trading Program* or to demonstrate compliance with the requirements of the *NOx Budget Trading Program*.

2. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget source* and each *NOx Budget unit* at the *source* shall *submit* the reports and *compliance certification*s required under the *NOx Budget Trading Program*, including those under Sections 8, 14, or 15 of this regulation.

k. Each submission under the *NOx Budget Trading Program* shall be *submit*ted, signed, and certified by the *NOx authorized account representative* or the alternate *NOx authorized account representative* for each *NOx Budget source* on behalf of which the submission is made. Each such submission shall include the following certification statement by the *NOx authorized account representative* or the alternate *NOx authorized account representative*: ``I am authorized to make this submission on behalf of the *owner*s and *operator*s of the *NOx Budget source*s or *NOx Budget unit*s for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information *submit*ted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

l. The *Department* and the *Administrator* will accept or act on a submission made on behalf of *owner* or *operator*s of a *NOx Budget source* or a *NOx Budget unit* only if the submission has been made, signed, and certified in accordance with Section 1(k) of this regulation.

m. No provision of the *NOx Budget Trading Program*, a *NOx Budget permit* application, a *NOx Budget permit*, or an exemption under Section 2 of this regulation shall be construed as exempting or excluding the *owner*s and *operator*s and, to the extent applicable, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget source* or *NOx Budget unit* from compliance with any other provision of the applicable, approved *State* implementation plan, a federally enforceable permit, or the *CAA*.

n. *NOx allowance allocation*s to *NOx Budget unit*s may be made only by the *Department* in accordance with Sections 9, 12, and 15 of this regulation, or by the *Administrator* in accordance with Section 9(b)(2) of this regulation.

Section 2 - Applicability

a. The following *unit*s in Delaware shall be *NOx Budget unit*s, and any *source* that includes one or more such *unit*s shall be a *NOx Budget source*, subject to the requirements of this regulation:

1. Any *unit* that serves a *generator* with a *nameplate capacity* of 15 MWe, or greater; or

2. Any *unit* that is not a *unit* under Section 2(a)(1) of this regulation and that has a *maximum design heat input* of 250 MMBTU/hr, or greater; or

3. Any *unit* that is an *opt-in unit* in accordance with the provisions of Regulation 37, NOx Budget Program, of Delaware=s AARegulations Governing the Control of Air Pollution@@, and that meets the monitoring requirements of 40 CFR Part 75, shall be a NOx budget *opt-in source* under Section 15 of this regulation and subject to the requirements of this regulation; or

4. Any *unit* that voluntarily chooses to opt into the *NOx Budget Trading Program* in accordance with the provisions of Section 15 of this regulation.

b. Any *NOx Budget unit* that is permanently retired shall be exempt from the *NOx Budget Trading Program*, except for the provisions of Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, and 16 of this regulation.

1. The exemption shall become effective the day on which the *unit* is permanently retired. Within 30 days of permanent retirement, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a statement to the *Department*, and a copy *submit*ted to the *Administrator*, stating that the *unit* is permanently retired and will comply with the requirements of Section 2(b) of this regulation.

2. Within 30 days of permanent retirement, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a permit

amendment request to the *Department* to amend any permit covering the *source* at which the *unit* is located to add the provisions and requirements of the exemption under Section 2(b) of this regulation.

3. After *receipt of* the notice under Section 2(b) of this regulation, the *Department* will amend any permit covering the *source* at which the *unit* is located to add the provisions and requirements of the exemption under Section 2(b) of this regulation.

4. A *unit* exempt under Section 2(b) of this regulation shall not emit any nitrogen oxides, starting on the date that the exemption takes effect. The *owner*s and *operator*s of the *unit* will be *allocated* allowances in accordance with Section 9 of this regulation.

5. A *unit* exempt under Section 2(b) of this regulation and located at a *source* that is required, or but for this exemption would be required, to have a *title V operating permit* shall not resume operation unless the *NOx authorized account representative* or the alternate *NOx authorized account representative* of the *source submit*s a complete *NOx Budget permit* application under Section 7 of this regulation for the *unit* not less than 18 months prior to the later of May 1, 2003 or the date on which the *unit* is to first resume operation.

6. A *unit* exempt under Section 2(b) of this regulation and located at a *source* that is required, or but for this exemption would be required, to have a non-*title V operating permit* shall not resume operation unless the *NOx authorized account representative* or the alternate *NOx authorized account representative* of the *source submit*s a complete *NOx Budget permit* application under Section 7 of this regulation for the *unit* not less than 18 months prior to the later of May 1, 2003 or the date on which the *unit* is to first resume operation.

7. The *owner*s and *operator*s and, to the extent applicable, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *unit* exempt under Section 2(b) of this regulation shall comply with the requirements of the *NOx Budget Trading Program* concerning all periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.

8. A *unit* that is exempt under Section 2(b) of this regulation is not eligible to be a *NOx Budget opt-in source* under Section 15 of this regulation.

9. For a period of 5 years from the date the records are created, the *owner*s and *operator*s of a *unit* exempt under Section 2(b) of this regulation shall retain at the *source* that includes the *unit*, records demonstrating that the *unit* is permanently retired. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the *Department* or the *Administrator*. The *owner*s and *operator*s bear the burden of proof that the *unit* is permanently retired.

10. On the earlier of the following dates, a *unit* exempt under Section 2(b) of this regulation shall lose its exemption:

i. The date on which the *NOx authorized account representative* or the alternate *NOx authorized account representative submit*s a *NOx Budget permit* application in accordance with Section 7 of this regulation; or

ii. The date on which the *NOx authorized account representative* or the alternate *NOx authorized account representative* is required under Section 7 of this regulation to *submit* a *NOx Budget permit* application.

11. For the purpose of applying monitoring requirements under Section 14 of this regulation, a *unit* that loses its exemption under this section shall be treated as a *unit* that commences operation or commercial operation on the first date on which the *unit* resumes operation.

c. A *general account* may be established in accordance with Section 10 of this regulation. The person responsible for the *general account* shall be responsible for meeting the requirements for a *NOx authorized account representative*.

d. Any person who owns, operates, leases, or controls a stationary NOx *source* in Delaware not subject to this program, by definition, may choose to opt into the *NOx Budget Trading Program* in accordance with the provisions of Section 15 of this regulation. Upon approval of the *opt-in* application by the *Department*, the person shall be subject to all terms and conditions of this regulation.

Section 3 - Definitions

For the purposes of this regulation, the following definitions apply. All terms not defined herein shall have the meaning given them in the *Clean Air Act* and Regulation 1 of the State of Delaware=s A*Regulations Governing the Control of Air Pollution*@.

a. *Account certificate of representation* means the completed and signed submission pursuant to Section 6 of this regulation for certifying the designation of a *NOx authorized account representative* or the alternate *NOx authorized account representative* for a *NOx Budget source* or a group of identified *NOx Budget source*s who is authorized to represent the *owner*s and *operator*s of such *source* or *source*s and of the *NOx Budget unit*s at such *source* or *source*s with regard to matters under the *NOx Budget Trading Program*.

b. *Account number* means the identification number given by the *Administrator* to each *NOx Allowance Tracking System account*.

c. *Acid Rain emissions limitation* means, as defined in 40 CFR 72.2, a limitation on *emissions* of sulfur dioxide or nitrogen oxides under the Acid Rain Program under title IV of the *CAA*.

d. *Administrator* means the *Administrator* of the

United States Environmental Protection Agency or the *Administrator*'s duly authorized representative.

e. *Allocate* or *allocation* means the determination by the *Department* or the *Administrator* of the number of *NOx allowance*s to be initially credited to a *NOx Budget unit*.

f. *Automated data acquisition and handling system* or *DAHS* means that component of the *CEMS*, or other *emissions monitoring system* approved for use pursuant to Section 14 of this regulation, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the *monitoring system* to produce a continuous record of the measured parameters in the measurement units required by Section 14 of this regulation.

g. *Banked allowance* means an allowance which is not used to reconcile *emissions* in the designated year of *allocation* but which is carried forward into the next year and flagged in the compliance or *general account* as Abanked@.

h. *Banking* means the retention of unused allowances from one *control period* for use in a future *control period*.

i. *Boiler* means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

j. *Clean Air Act* (*CAA*) means the *CAA*, 42 U.S.C. 7401, et seq., as amended by Pub. L. No. 101-549 (November 15, 1990).

k. *Combined cycle system* means a system comprised of one or more *combustion turbine*s, heat recovery steam *generator*s, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

l. *Combustion turbine* means an enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

m. *Commence commercial operation* means, with regard to a *unit* that serves a *generator*, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. Except as provided in Section 2(b) of this regulation, for a *unit* that is a *NOx Budget unit* pursuant to Section 2 of this regulation on the date the *unit* commences commercial operation, such date shall remain the *unit*'s date of commencement of commercial operation even if the *unit* is subsequently modified, reconstructed, or repowered. Except as provided in Section 2(b) or Section 15 of this regulation, for a *unit* that is not a *NOx Budget unit* pursuant to Section 2(a)(1) or 2(a)(2) of this regulation on the date the *unit* commences commercial operation, the date the *unit* becomes a *NOx Budget unit* pursuant to Section 2(a)(1) or 2(a)(2) of this regulation shall be the *unit*'s date of commencement of commercial operation.

n. *Commence operation* means to have begun any mechanical, chemical, or electronic process, including, with regard to a *unit*, start-up of a *unit*'s combustion chamber. Except as provided in Section 2(b) of this regulation, for a *unit* that is a *NOx Budget unit* pursuant to Section 2(a) of this regulation on the date of commencement of operation, such date shall remain the *unit*'s date of commencement of operation even if the *unit* is subsequently modified, reconstructed, or repowered. Except as provided in Section 2(b) or Section 15 of this regulation, for a *unit* that is not a *NOx Budget unit* pursuant to Section 2(a) of this regulation on the date of commencement of operation, the date the *unit* becomes a *NOx Budget unit* pursuant to Section 2(a) of this regulation shall be the *unit*'s date of commencement of operation.

o. *Common stack* means a single flue through which *emissions* from two or more *unit*s are exhausted.

p. *Compliance account* means a *NOx Allowance Tracking System account*, established by the *Administrator* for a *NOx Budget unit* pursuant to Section 10 of this regulation, in which the *NOx allowance allocation*s for the *unit* are initially *recorded* and in which are held *NOx allowance*s available for use by the *unit* for a *control period* for the purpose of meeting the *unit*'s *NOx Budget emissions limitation*.

q. *Compliance certification* means a submission to the *Department* or the *Administrator*, as appropriate, that is required pursuant to Section 8 of this regulation to report a *NOx Budget source*'s or a *NOx Budget unit*'s compliance or noncompliance with this regulation and that is signed by the *NOx authorized account representative* or the alternate *NOx authorized account representative* in accordance with the requirements of Section 5 of this regulation.

r. *Continuous emission monitoring system* (*CEMS*) means the equipment required pursuant to Section 14 of this regulation to sample, analyze, measure, and provide, by readings taken at least once every 15 minutes of the measured parameters, a permanent record of nitrogen oxides *emissions*, expressed in *tons* per hour for nitrogen oxides. The following systems are component parts included, consistent with 40 CFR Part 75, in a *continuous emission monitoring system*:

1. Flow monitor;

2. Nitrogen oxides pollutant concentration monitors;

3. Diluent gas monitor (oxygen or carbon dioxide) when such monitoring is required by Section 14 of this regulation;

4. A continuous moisture monitor when such monitoring is required Section 14 of this regulation; and

5. An *automated data acquisition and handling system*.

s. *Control period* means the period beginning May 1 of a year and ending on September 30 of the same year,

inclusive.

t. *Current year* means the calendar year in which the action takes place or for which an *allowance* is *allocated*. For example, an allowance *allocated* for use in calendar year 2003 which goes unused and becomes a *banked allowance* in 2004, can be used in the calendar year 2004 subject to the conditions for *banked allowance* use as stated in this regulation.

u. *Department* means the State of Delaware *Department* of Natural Resources and Environmental Control.

v. *Emissions* means air pollutants exhausted from a *unit* or *source* into the atmosphere, as measured, recorded, and reported to the *Administrator* by the *NOx authorized account representative* or the alternate *NOx authorized account representative* and as determined by the *Administrator* in accordance with Section 14 of this regulation.

w. Reserved.

x. *Energy Information Administration* means the *Energy Information Administration* of the United States *Department* of Energy.

y. *Excess emissions* means any *tonnage* of nitrogen oxides emitted by a *NOx Budget unit* during a *control period* that exceeds the *NOx Budget emissions limitation* for the *unit*.

z. *Fossil fuel* means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material.

aa. *Fossil fuel-fired* means, with regard to a *unit*:

1. The combustion of *fossil fuel*, alone or in combination with any other fuel, where *fossil fuel* actually combusted comprises more than 50 percent of the annual *heat input* on a Btu basis during any year starting in 1990 or, if a *unit* had no *heat input* starting in 1990, during the last year of operation of the *unit* prior to 1990; or

2. The combustion of *fossil fuel*, alone or in combination with any other fuel, where *fossil fuel* is projected to comprise more than 50 percent of the annual *heat input* on a Btu basis during any year; provided that the *unit* shall be ``*fossil fuel-fired*" as of the date, during such year, on which the *unit* begins combusting *fossil fuel*.

bb. *General account* means a *NOx Allowance Tracking System account*, established in accordance with Section 10 of this regulation, that is not a *compliance account* or an *overdraft account*.

cc. *Generator* means a device that produces electricity.

dd. *Heat input* means the product (in MMBTU/time) of the gross calorific value of the fuel (in BTU/lb) and the fuel feed rate into a combustion device (in mass of fuel/time), or as calculated by any other method approved by the *Department* and the *Administrator*, as measured, recorded, and reported to the *Administrator* by the *NOx authorized account representative* or the alternate *NOx authorized account representative* and as determined by the *Administrator* in accordance with Section 14 of this regulation, and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust from other *source*s.

ee. *Indirect heat exchanger* means combustion equipment in which the flame and/or products of combustion are separated from any contact with the principal material in the process by metallic or refractory walls, which includes, but is not limited to, steam *boiler*s, vaporizers, melting pots, heat exchangers, column reboilers, fractioning column feed preheaters, and fuel-fired reactors such as steam hydrocarbon reformer heaters and pyrolysis heaters.

ff. *Life-of-the-unit, firm power contractual arrangement* means a *unit* participation power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a specified amount or percentage of *nameplate capacity* and associated energy from any specified *unit* and pays its proportional amount of such *unit*'s total costs, pursuant to a contract:

1. For the life of the *unit*;

2. For a cumulative term of no less than 30 years, including contracts that permit an election for early termination; or

3. For a period equal to or greater than 25 years or 70 percent of the economic useful life of the *unit* determined as of the time the *unit* is built, with option rights to purchase or release some portion of the *nameplate capacity* and associated energy generated by the *unit* at the end of the period.

hh. *Maximum design heat input* means the ability of a *unit* to combust a stated maximum amount of fuel per hour on a steady state basis, as determined by the physical design and physical characteristics of the *unit.*

ii. *Maximum potential hourly heat input* means an hourly *heat input* used for reporting purposes when a *unit* lacks certified monitors to report *heat input.* If the *unit* intends to use Appendix D of 40 CFR Part 75 to report *heat input*, this value should be calculated, in accordance with 40 CFR Part 75, using the maximum fuel flow rate and the maximum gross calorific value. If the *unit* intends to use a flow monitor and a diluent gas monitor, this value should be reported, in accordance with 40 CFR Part 75, using the maximum potential flowrate and either the maximum carbon dioxide concentration (in percent CO2) or the minimum oxygen concentration (in percent O2).

jj. *Maximum potential NOx emission rate* means the emission rate of nitrogen oxides (in lb/MMBTU) calculated in accordance with section 3 of appendix F of 40 CFR Part 75, using the maximum potential nitrogen oxides concentration as defined in section 2 of appendix A of 40 CFR Part 75, and either the maximum oxygen concentration (in percent O2) or the minimum carbon dioxide concentration (in percent CO2), under all *operating*

conditions of the *unit* except for *unit* start up, shutdown, and upsets.

kk. *Maximum rated hourly heat input* means a *unit*-specific maximum hourly *heat input* (MMBTU/hr) which is the higher of the manufacturer's *maximum rated hourly heat input* or the highest observed hourly *heat input.*

ll. *Monitoring system* means any *monitoring system* that meets the requirements of Section 14 of this regulation, including a continuous *emissions monitoring system*, an excepted *monitoring system*, or an alternative *monitoring system*.

mm. *Most stringent State or Federal NOx emissions limitation* means, with regard to a *NOx Budget opt-in source*, the lowest NOx *emissions* limitation (in terms of lb/MMBTU) that is applicable to the *unit* under *State* or Federal law, regardless of the averaging period to which the *emissions* limitation applies.

nn. *Nameplate capacity* means the maximum electrical generating output (in MWe) that a *generator* can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States *Department* of Energy standards.

oo. *Non-title V permit* means a federally enforceable permit administered by the *Department* pursuant to the *CAA* and regulatory authority under the *CAA*, other than title V of the *CAA* and 40 CFR Part 70 or 71.

pp. *NOx allowance* means an authorization by the *Department* or the *Administrator* under the *NOx Budget Trading Program* to emit up to one *ton* of nitrogen oxides during the *control period* of the specified year or of any year thereafter.

qq. *NOx allowance deduction* or *deduct NOx allowances* means the permanent withdrawal of *NOx allowance*s by the *Administrator* from a *NOx Allowance Tracking System compliance account* or *overdraft account* to account for the number of *tons* of NOx *emissions* from a *NOx Budget unit* for a *control period*, determined in accordance with Section 14 of this regulation, or for any other allowance surrender obligation of this regulation.

rr. *NOx allowances held* or *hold NOx allowances* means the *NOx allowance*s *recorded* by the *Administrator*, or *submit*ted to the *Administrator* for *recordation*, in accordance with Sections 11, 13, and 15 of this regulation, in a *NOx Allowance Tracking System account*.

ss. *NOx Allowance Tracking System* (*NATS*) means the system by which the *Administrator record*s *allocation*s, deductions, and transfers of *NOx allowance*s under the *NOx Budget Trading Program.*

tt. *NOx Allowance Tracking System account* means an account in the *NOx Allowance Tracking System* established by the *Administrator* for purposes of recording the *allocation*, holding, transferring, or deducting of *NOx allowance*s.

uu. *NOx Allowance transfer* means the conveyance of one or more allowances from one account to another account by whatever means, including but not limited to purchase, trade, auction, or gift in accordance with the procedures established in Section 13 of this regulation, effected by the submission of an *allowance transfer* request to the *Administrator.*

vv. *NOx allowance transfer deadline* means midnight of November 30 or, if November 30 is not a business day, midnight of the first business day thereafter and is the deadline by which *NOx allowance*s may be *submit*ted for *recordation* in a *NOx Budget unit*'s *compliance account*, or the *overdraft account* of the *source* where the *unit* is located, in order to meet the *unit*'s *NOx Budget emissions limitation* for the *control period* immediately preceding such deadline.

ww. *NOx authorized account representative* means, for a *NOx Budget source* or *NOx Budget unit* at the *source*, the natural person who is authorized by the *owner*s and *operator*s of the *source* and all *NOx Budget unit*s at the *source*, in accordance with Section 5 of this regulation, to represent and legally bind each *owner* and *operator* in matters pertaining to the *NOx Budget Trading Program* or, for a *general account*, the natural person who is authorized, in accordance Section 5 of this regulation, to transfer or otherwise dispose of *NOx allowances held* in the *general account*.

xx. *NOx Budget emissions limitation* means, for a *NOx Budget unit*, the *tonnage* equivalent of the *NOx allowance*s available for compliance deduction for the *unit* and for a *control period* pursuant to Section 11 of this regulation, adjusted by any deductions of such *NOx allowance*s to account for actual *utilization* under Section 15 of this regulation for the *control period* or to account for *excess emissions* for a prior *control period* under Section 16 of this regulation or to account for withdrawal from the NOx Budget Program, or for a change in regulatory status, for a *NOx Budget opt-in source* under Section 15 of this regulation.

yy. *NOx Budget opt-in permit* means a *NOx Budget permit* covering a *NOx Budget opt-in source*.

zz. *NOx Budget opt-in source* means a *unit* that has been elected to become a *NOx Budget unit* under the *NOx Budget Trading Program* and whose *NOx Budget opt-in permit* has been issued and is in effect under Section 15 of this regulation.

aaa. *NOx Budget permit* means the legally binding and federally enforceable written document, or portion of such document, issued by the *Department* under this regulation, including any permit revisions, specifying the *NOx Budget Trading Program* requirements applicable to a *NOx Budget source*, to each *NOx Budget unit* at the *NOx Budget source*, and to the *owner*s and *operator*s and the *NOx authorized account representative* of the *NOx Budget source* and each *NOx Budget unit*.

bbb. *NOx Budget source* means a *source* that includes

one or more *NOx Budget unit*s.

ccc. *NOx Budget Trading Program* means a multi-*state* nitrogen oxides air pollution control and emission reduction program adapted pursuant to 40 CFR 51.121, Delaware=s portion of which is established in accordance with this regulation, as a means of mitigating the interstate transport of ozone and nitrogen oxides, an ozone precursor.

ddd. *NOx Budget unit* means a *unit* that is subject to the *NOx Budget Trading Program emissions* limitation under Section 2 or Section 15 of this regulation.

eee. *Operating* means, with regard to a *unit* under Section 7(c)(4)(ii) and Section 15 of this regulation, having documented *heat input* for more than 876 hours in the 6 months immediately preceding the submission of an application for an initial *NOx Budget permit* under Section 15 of this regulation.

fff. *Operator* means any person who operates, controls, or supervises a *NOx Budget unit*, a *NOx Budget source*, or *unit* for which an application for a *NOx Budget opt-in permit* under Section 15 of this regulation is *submit*ted and not denied or withdrawn and shall include, but not be limited to, any holding company, utility system, or plant manager of such a *unit* or *source*.

ggg. *Opt-in* means to be elected to become a *NOx Budget unit* under the *NOx Budget Trading Program* through a final, effective *NOx Budget opt-in permit* under Section 15 of this regulation.

hhh. *Overdraft account* means the *NOx Allowance Tracking System account*, established by the *Administrator* under Section 10 of this regulation, for each *NOx Budget source* where there are two or more *NOx Budget unit*s.

iii. *Owner* means any of the following persons:

1. Any holder of any portion of the legal or equitable title in a *NOx Budget unit* or in a *unit* for which an application for a *NOx Budget opt-in permit* under Section 15 of this regulation is *submit*ted and not denied or withdrawn; or

2. Any holder of a leasehold interest in a *NOx Budget unit* or in a *unit* for which an application for a *NOx Budget opt-in permit* under Section 15 of this regulation is *submit*ted and not denied or withdrawn; or

3. Any purchaser of power from a *NOx Budget unit* or from a *unit* for which an application for a *NOx Budget opt-in permit* under Section 15 of this regulation is *submit*ted and not denied or withdrawn under a *life-of-the-unit, firm power contractual arrangement*. However, unless expressly provided for in a leasehold agreement, *owner* shall not include a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the *NOx Budget unit* or the *unit* for which an application for a *NOx Budget opt-in permit* under Section 15 of this regulation is *submit*ted and not denied or withdrawn; or

4. With respect to any *general account*, any person who has an ownership interest with respect to the *NOx allowances held* in the *general account* and who is subject to the binding agreement for the *NOx authorized account representative* or the alternate *NOx authorized account representative* to represent that person's ownership interest with respect to *NOx allowance*s.

jjj. *Receive* or *receipt of* means, when referring to the *Department* or the *Administrator*, to come into possession of a document, information, or correspondence (whether sent in writing or by authorized electronic transmission), as indicated in an official correspondence log, or by a notation made on the document, information, or correspondence, by the *Department* or the *Administrator* in the regular course of business.

kkk. *Recordation, record*, or *recorded* means, with regard to *NOx allowance*s, the movement of *NOx allowance*s by the *Administrator* from one *NOx Allowance Tracking System account* to another, for purposes of *allocation*, transfer, or deduction.

lll. *Reference method* means any direct test method of sampling and analyzing for an air pollutant as specified in 40 CFR Part 60, appendix A.

mmm. *Serial number* means, when referring to *NOx allowance*s, the unique identification number assigned to each *NOx allowance* by the *Administrator*, under Section 10 of this regulation.

nnn.*Source* means any governmental, institutional, commercial, or industrial structure, installation, plant, building, or facility that emits or has the potential to emit any regulated air pollutant under the *CAA*. For purposes of section 502(c) of the *CAA*, a ``*source*,'' including a ``*source*'' with multiple *unit*s, shall be considered a single ``facility.''

ooo. *State* means one of the 48 contiguous *State*s and the District of Columbia specified in 40 CFR Part 51.121, or any non-federal authority in or including such *State*s or the District of Columbia (including local agencies, and Statewide agencies) or any eligible Indian tribe in an area of such *State* or the District of Columbia, that adopts a *NOx Budget Trading Program* pursuant to 40 CFR 51.121. The term ``State'' shall have its conventional meaning where such meaning is clear from the context.

ppp. *State trading program budget* means the total number of NOx *tons* apportioned to all *NOx Budget unit*s in a given *State*, in accordance with the *NOx Budget Trading Program*, for use in a given *control period*.

qqq. *Submit* or serve means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation:

1. In person;
2. By United States Postal Service; or
3. By other means of dispatch or transmission and delivery.

Compliance with any “submission,” “service,”

or ``mailing'' deadline shall be determined by the date of dispatch, transmission, or mailing and not the date of receipt.

rrr. *Title V operating permit* means a permit issued under title V of the *CAA* and 40 CFR Part 70 or Part 71.

sss. *Title V operating permit regulations* means the regulations that the *Administrator* has approved or issued as meeting the requirements of title V of the *CAA* and 40 CFR Part 70 or Part 71.

ttt. *Ton* or *tonnage* means any ``short ton'' (i.e., 2,000 pounds). For the purpose of determining compliance with the *NOx Budget emissions limitation*, total *tons* for a *control period* shall be calculated as the sum of all recorded hourly *emissions* (or the *tonnage* equivalent of the recorded hourly *emissions* rates) in accordance with Section 14 of this regulation, with any remaining fraction of a *ton* equal to or greater than 0.50 *ton* deemed to equal one *ton* and any fraction of a *ton* less than 0.50 *ton* deemed to equal zero tons.

uuu. *Unit* means a *fossil fuel-fired* stationary *boiler, indirect heat exchanger, combustion turbine*, or *combined cycle system*.

vvv. *Unit operating day* means a calendar day in which a *unit* combusts any fuel.

www. *Unit operating hour* or *hour of unit operation* means any hour (or fraction of an hour) during which a *unit* combusts any fuel.

xxx. *Utilization* means the *heat input* (expressed in MMBTU/time) for a *unit*. The *unit*'s total *heat input* for the *control period* in each year will be determined in accordance with 40 CFR Part 75 if the *NOx Budget unit* was otherwise subject to the requirements of 40 CFR Part 75 for the year, or will be based on the best available data reported to the *Administrator* for the *unit* if the *unit* was not otherwise subject to the requirements of 40 CFR Part 75 for the year.

Section 4 - Measurements, Abbreviations, and Acronyms

Measurements, abbreviations, and acronyms used in this regulation are defined as follows:

BTU--British thermal unit.
hr--hour.
Kwh--kilowatt hour.
lb--pounds.
MMBTU--million Btu.
MWe--megawatt electrical.
ton--2000 pounds.
CO2--carbon dioxide.
NOx--nitrogen oxides.
O2--oxygen.

Section 5 - NOx Authorized Account Representative for NOx Budget Sources

a. Authorization and responsibilities of the *NOx authorized account representative*.

1. Each *NOx Budget source*, including all *NOx Budget unit*s at the *source*, shall have one and only one *NOx authorized account representative*, with regard to all matters under the *NOx Budget Trading Program* concerning the *source* or any *NOx Budget unit* at the *source*.

2. The *NOx authorized account representative* of the *NOx Budget source* shall be selected by an agreement binding on the *owner*s and *operator*s of the *source* and all *NOx Budget unit*s at the *source*.

3. Upon receipt by the *Administrator* of a complete *account certificate of representation* under Section 6 of this regulation, the *NOx authorized account representative* of the *source* shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each *owner* and *operator* of the *NOx Budget source* represented and each *NOx Budget unit* at the *source* in all matters pertaining to the *NOx Budget Trading Program*, not withstanding any agreement between the *NOx authorized account representative* and such *owner*s and *operator*s. The *owner*s and *operator*s shall be bound by any decision or order issued to the *NOx authorized account representative* by the *Department*, the *Administrator*, or a court regarding the *source* or *unit*.

4. No *NOx Budget permit* shall be issued, and no *NOx Allowance Tracking System account* shall be established for a *NOx Budget unit* at a *source*, until the *Administrator* has *receive*d a complete *account certificate of representation* under Section 6 of this regulation for a *NOx authorized account representative* of the *source* and the *NOx Budget unit*s at the *source*.

5. Each submission under the *NOx Budget Trading Program* shall be *submit*ted, signed, and certified by the *NOx authorized account representative* for each *NOx Budget source* on behalf of which the submission is made. Each such submission shall include the following certification statement by the *NOx authorized account representative*: ``I am authorized to make this submission on behalf of the *owner*s and *operator*s of the NOx Budget *source*s or NOx Budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

6. The *Department* and the *Administrator* will accept or act on a submission made on behalf of *owner* or *operator*s of a *NOx Budget source* or a *NOx Budget unit* only if the submission has been made, signed, and certified in accordance with Section 5(a)(5) of this regulation.

7. The *NOx authorized account representative* may be changed at any time upon receipt by the *Administrator* of a superseding complete *account certificate of representation* under Section 6 of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous *NOx authorized account representative* prior to the time and date when the *Administrator receive*s the superseding *account certificate of representation* shall be binding on the new *NOx authorized account representative* and the *owner*s and *operator*s of the *NOx Budget source* and the *NOx Budget unit*s at the *source*.

b. Alternate NOx authorized account representative.

1. An *account certificate of representation* may designate one and only one alternate *NOx authorized account representative* who may act on behalf of the *NOx authorized account representative*. The agreement by which the alternate *NOx authorized account representative* is selected shall include a procedure for authorizing the alternate *NOx authorized account representative* to act in lieu of the *NOx authorized account representative*.

2. Upon receipt by the *Administrator* of a complete *account certificate of representation* under Section 6 of this regulation, any representation, action, inaction, or submission by the alternate *NOx authorized account representative* shall be deemed to be a representation, action, inaction, or submission by the *NOx authorized account representative*.

3. The alternate *NOx authorized account representative* may be changed at any time upon receipt by the *Administrator* of a superseding complete *account certificate of representation* under Section 6 of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous alternate *NOx authorized account representative* prior to the time and date when the *Administrator receive*s the superseding *account certificate of representation* shall be binding on the new alternate *NOx authorized account representative* and the *owner*s and *operator*s of the *NOx Budget source* and the *NOx Budget unit*s at the *source*.

Section 6 - Account Certificate of Representation

a. A complete *account certificate of representation* for a *NOx authorized account representative* or an alternate *NOx authorized account representative* shall include the following elements in a format prescribed by the *Administrator*:

1. Identification of the *NOx Budget source* and each *NOx Budget unit* at the *source* for which the *account certificate of representation* is *submit*ted.

2. The name, address, e-mail address (if any), telephone number, and facsimile transmission number (if any) of the *NOx authorized account representative* and any alternate *NOx authorized account representative.*

3. A list of the *owner*s and *operator*s of the *NOx Budget source* and of each *NOx Budget unit* at the *source*.

4. The following certification statement by the *NOx authorized account representative* and any alternate *NOx authorized account representative*: ``I certify that I was selected as the *NOx authorized account representative* or alternate *NOx authorized account representative*, as applicable, by an agreement binding on the *owner*s and *operator*s of the *NOx Budget source* and each *NOx Budget unit* at the *source*. I certify that I have all the necessary authority to carry out my duties and responsibilities under the *NOx Budget Trading Program* on behalf of the *owner*s and *operator*s of the *NOx Budget source* and of each *NOx Budget unit* at the *source* and that each such *owner* and *operator* shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the *Department*, the *Administrator*, or a court regarding the *source* or *unit*."

5. The signature of the *NOx authorized account representative* and any alternate *NOx authorized account representative* and the dates signed.

b. Unless otherwise required by the *Department* or the *Administrator*, documents of agreement referred to in the *account certificate of representation* shall not be *submit*ted to the *Department* or the *Administrator*. Neither the *Department* nor the *Administrator* shall be under any obligation to review or evaluate the sufficiency of such documents, if *submit*ted.

c. Changes in the *owner*s and *operator*s.

1. In the event a new *owner* or *operator* of a *NOx Budget source* or a *NOx Budget unit* is not included in the list of *owner*s and *operator*s *submit*ted in the *account certificate of representation*, such new *owner* or *operator* shall be deemed to be subject to and bound by the *account certificate of representation*, the representations, actions, inactions, and submissions of the *NOx authorized account representative* and any alternate *NOx authorized account representative* of the *source* or *unit*, and the decisions, orders, actions, and inactions of the *Department* or the *Administrator*, as if the new *owner* or *operator* were included in such list.

2. Within 30 days following any change in the *owner*s and *operator*s of a *NOx Budget source* or a *NOx Budget unit*, including the addition of a new *owner* or *operator*, the *NOx authorized account representative* or alternate *NOx authorized account representative* shall *submit* a revision to the *account certificate of representation* amending the list of *owner*s and *operator*s to include the change.

d. Objections concerning the *NOx authorized account representative*.

1. Once a complete *account certificate of representation* under Section 6 of this regulation has been *submit*ted and *receive*d, the *Department* and the *Administrator* will rely on the *account certificate of*

representation unless and until a superseding complete *account certificate of representation* under Section 6 of this regulation is *receive*d by the *Administrator.*

2. Except as provided in Section 5 of this regulation, no objection or other communication *submit*ted to the *Department* or the *Administrator* concerning the authorization, or any representation, action, inaction, or submission of the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall affect any representation, action, inaction, or submission of the *NOx authorized account representative* or the alternate *NOx authorized account representative* or the finality of any decision or order by the *Department* or the *Administrator* under the *NOx Budget Trading Program*.

3. Neither the *Department* nor the *Administrator* will adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of any *NOx authorized account representative* or the alternate *NOx authorized account representative*, including private legal disputes concerning the proceeds of *NOx allowance* transfers.

Section 7 - Permits

a. General *NOx Budget Trading Program* permit requirements.

1. For each *NOx Budget source* required to have a federally enforceable permit, such permit shall include a *NOx Budget permit* administered by the *Department*.

i. For *NOx Budget source*s required to have a *title V operating permit*, the NOx Budget portion of the title V permit shall be administered in accordance with the *Department*'s *title V operating permit*s *regulation* promulgated under 40 CFR Part 70 or 71, Regulation 30 of the State of Delaware=s ARegulations Governing the Control of Air Pollution@, except as provided otherwise by Section 7 or Section 15 of this regulation. The applicable provisions of such *title V operating permit*s *regulations* shall include, but are not limited to, those provisions addressing o*perating* permit applications, *operating* permit application shield, *operating* permit duration, *operating* permit shield, *operating* permit issuance, *operating* permit revision and reopening, public participation, *State* review, and review by the *Administrator.*

ii. For *NOx Budget source*s required to have a *non-title V permit*, the NOx Budget portion of the *non-title V permit* shall be administered in accordance with the *Department*'s regulations promulgated to administer *non-title V permit*s, Regulation 2 of the State of Delaware=s ARegulations Governing the Control of Air Pollution@, except as provided otherwise by Section 7 or Section 15 of this regulation.

2. Each *NOx Budget permit* (including a draft or proposed *NOx Budget permit*, if applicable) shall contain all applicable *NOx Budget Trading Program* requirements and shall be a complete and segregable portion of the permit under Section 7(a)(1) of this regulation.

b. Submission of *NOx Budget permit* applications.

1. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of any *NOx Budget source* required to have a federally enforceable permit shall *submit* to the *Department* a complete *NOx Budget permit* application under Section 7(a) of this regulation by the applicable deadline as follows:

i. For *NOx Budget source*s required to have a *title V operating permit*:

A. For any *source*, with one or more *NOx Budget unit*s under Section 2 of this regulation that *commence operation* before January 1, 2000, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a complete *NOx Budget permit* application under Section 7(a) of this regulation covering such *NOx Budget unit*s to the *Department* no later than November 1, 2001.

B. For any *source*, with any *NOx Budget unit* under Section 2 of this regulation that commences operation on or after January 1, 2000, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a complete *NOx Budget permit* application under Section 7(a) of this regulation covering such *NOx Budget unit* to the *Department* by the later of November 1, 2001, or the date 18 months before the date on which the *NOx Budget unit* commences operation.

ii. For *NOx Budget source*s not required to have a title V permit:

A. For any *source*, with one or more *NOx Budget unit*s under Section 2 of this regulation that *commence operation* before January 1, 2000, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a complete *NOx Budget permit* application under Section 7(a) of this regulation covering such *NOx Budget unit*s to the *Department* no later than November 1, 2001.

B. For any *source*, with any *NOx Budget unit* under Section 2 of this regulation that commences operation on or after January 1, 2000, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a complete *NOx Budget permit* application under Section 7(a) of this regulation covering such *NOx Budget unit* to the *Department* by the later of November 1, 2001, or the date 18 months before the date on which the *NOx Budget unit* commences operation.

2. Duty to reapply.

i. For a *NOx Budget source* required to have a *title V operating permit*, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a complete *NOx Budget permit* application under Section 7(a) of this regulation for the *NOx Budget source* covering the *NOx Budget unit*s at the *source*

in accordance with the requirements of Regulation 30 of the State of Delaware=s ARegulations Governing the Control of Air Pollution@ addressing *operating* permit renewal.

ii. For a *NOx Budget source* required to have a *non-title V permit*, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a complete *NOx Budget permit* application under Section 7(a) of this regulation for the *NOx Budget source* covering the *NOx Budget unit*s at the *source* in accordance with the requirements of Regulation 2 of the State of Delaware=s ARegulations Governing the Control of Air Pollution@ addressing permit renewal.

c. A complete *NOx Budget permit* application shall include the following elements concerning the *NOx Budget source* for which the application is *submit*ted, in a format prescribed by the *Department*:

1. Identification of the *NOx Budget source*, including plant name and the ORIS (Office of Regulatory Information Systems) or facility code assigned to the *source* by the *Energy Information Administration*, if applicable;

2. Identification of each *NOx Budget unit* at the *NOx Budget source* and whether it is a *NOx Budget unit* under Section 2(a)(1) or 2(a)(2) of this regulation, or a NOx budget *opt-in source* under Section 2(a)(3) or 2(a)(4) of this regulation;

3. The general requirements under Section 1 of this regulation; and

4. For each NOx Budget *opt-in* unit at the *NOx Budget source*, the following certification statements by the *NOx authorized account representative* or the alternate *NOx authorized account representative*:

i. @I certify that each *unit* for which this permit application is *submit*ted under Section 15 of Regulation 39 is not a *NOx Budget unit* under Section 2(a)(1) of Regulation 39 and is not covered by a retired *unit* exemption under Section 2(b) of Regulation 39 that is in effect."

ii. If the application is for an initial *NOx Budget opt-in permit*, ``I certify that each unit for which this permit application is *submit*ted under Section 15 of Regulation 39 is currently *operating*, as that term is defined under Section 3 of Regulation 39."

d. *NOx Budget permit* contents.

1. Each *NOx Budget permit* (including any draft or proposed *NOx Budget permit*, if applicable) will contain, in a format prescribed by the *Department*, all elements required for a complete *NOx Budget permit* application under Section 7(c) of this regulation as approved or adjusted by the *Department*.

2. Each *NOx Budget permit* is deemed to incorporate automatically the definitions of terms under Section 3 of this regulation and, upon *recordation* by the *Administrator* under Sections 10, 13, 15, and 16 of this regulation, every *allocation*, transfer, or deduction of a *NOx allowance* to or from the *compliance account*s of the *NOx Budget unit*s covered by the permit or the *overdraft account* of the *NOx Budget source* covered by the permit.

e. The initial *NOx Budget permit* covering a *NOx Budget unit* for which a complete *NOx Budget permit* application is timely *submit*ted under Section 7(b) of this regulation shall become effective by the later of:

1. May 1, 2003;

2. May 1 of the year in which the *NOx Budget unit* commences operation, if the *unit* commences operation on or before May 1 of that year;

3. The date on which the *NOx Budget unit* commences operation, if the *unit* commences operation during a *control period*; or

4. May 1 of the year following the year in which the *NOx Budget unit* commences operation, if the *unit* commences operation on or after October 1 of the year.

f. *NOx Budget permit* revisions.

1. For a *NOx Budget source* with a *title V operating permit*, except as provided in Section 7(b)(2) of this regulation, the *Department* will revise the *NOx Budget permit*, as necessary, in accordance with the *Department*'s *title V operating permits regulation*, Regulation 30 of the State of Delaware=s ARegulations Governing the Control of Air Pollution@, addressing permit revisions.

2. For a *NOx Budget source* with a *non-title V permit*, except as provided in Section 7(b)(2) of this regulation, the *Department* will revise the *NOx Budget permit*, as necessary, in accordance with the *Department*'s *non-title V permit*s regulation, Regulation 2 of the State of Delaware=s ARegulations Governing the Control of Air Pollution@, addressing permit revisions.

Section 8 - Compliance Certification

a. For each *control period* in which one or more *NOx Budget unit*s at a *source* are subject to the *NOx Budget emissions limitation*, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of the *source* shall *submit* to the *Department* and the *Administrator* by November 30 of that year, a *compliance certification* report for each *source* covering all such *unit*s.

b. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall include in the *compliance certification* report under Section 8(a) of this regulation the following elements, in a format prescribed by the *Administrator*, concerning each *unit* at the *source* and subject to the *NOx Budget emissions limitation* for the *control period* covered by the report:

1. Identification of each *NOx Budget unit*;

2. At the *NOx authorized account representative*'s or alternate *NOx authorized account representative*=s option, the *serial number*s of the *NOx allowance*s that are to be deducted from each *unit*'s

compliance account under Section 11 of this regulation for the *control period*;

3. At the *NOx authorized account representative*'s or alternate *NOx authorized account representative*'s option, for *unit*s sharing a *common stack* and having NOx *emissions* that are not monitored separately or apportioned in accordance with Section 14 of this regulation, the percentage of allowances that is to be deducted from each *unit*'s *compliance account* under Section 11(d) of this regulation; and

4. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall certify, based on reasonable inquiry of those persons with primary responsibility for o*perating* the *source* and the *NOx Budget unit*s at the *source* in compliance with the *NOx Budget Trading Program*, whether each *NOx Budget unit* for which the *compliance certification* is *submit*ted was operated during the calendar year covered by the report in compliance with the requirements of the *NOx Budget Trading Program* applicable to the *unit*, including:

i. Whether the *unit* was operated in compliance with the *NOx Budget emissions limitation*;

ii. Whether the monitoring plan that governs the *unit* has been maintained to reflect the actual operation and monitoring of the *unit*, and contains all information necessary to attribute NOx *emissions* to the *unit*, in accordance with Section 14 of this regulation;

iii. Whether all the NOx *emissions* from the *unit*, or a group of *unit*s (including the *unit*) using a *common stack*, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with Section 14 of this regulation. If conditional data were reported, the *owner* or *operator* shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions has been made;

iv. Whether the facts that form the basis for certification under Section 14 of this regulation of each monitor at the *unit* or a group of *unit*s (including the *unit*) using a *common stack*, or for using an excepted monitoring method or alternative monitoring method approved under Section 14 of this regulation, if any, has changed; and

v. If a change is required to be reported under Section 8(b)(4)(iv) of this regulation, specify the nature of the change, the reason for the change, when the change occurred, and how the *unit*'s compliance status was determined subsequent to the change, including what method was used to determine *emissions* when a change mandated the need for monitor recertification.

c. The *Department* or the *Administrator* may review and conduct independent audits concerning any *compliance certification* or any other submission under the *NOx Budget Trading Program* and make appropriate adjustments of the information in the *compliance certification*s or other submissions.

d. The *Administrator* may *deduct NOx allowances* from or transfer *NOx allowance*s to a *unit*'s *compliance account* or a *source*'s *overdraft account* based on the information in the *compliance certification*s or other submissions, as adjusted under Section 8(c) of this regulation.

Section 9 - NOx Allowance Allocations

a. The *State trading program budget allocated* by the *Department* under Section 9 of this regulation for a *control period* shall not exceed the total number of *tons* of NOx *emissions* apportioned to the *NOx Budget unit*s, identified in Appendix A of this regulation, in the State of Delaware for any *control period*.

b. Timing requirements for *NOx allowance allocation*s.

1. By September 30, 1999, the *Department* shall *submit* to the *Administrator* the *NOx allowance allocation*s, in accordance with Section 9(d) of this regulation, for the *control period*s in 2003, 2004, and 2005.

2. By April 1, 2003 and April 1 of each year thereafter, the *Department* will *submit* to the *Administrator* the *NOx allowance allocation*s, in accordance with Section 9(d) of this regulation, for the *control period* in the year that is three years after the year of the applicable deadline for submission under Section 9(b)(2) of this regulation. If the *Department* fails to *submit* to the *Administrator* the *NOx allowance allocation*s in accordance with Section 9(b)(2) of this regulation, the *Administrator* will allocate, for the applicable *control period*, the same number of *NOx allowance*s as were *allocated* for the preceding *control period*.

c. *NOx Budget unit*s that receive a NOx *emissions NOx allowance allocation* and subsequently cease to operate shall continue to receive *NOx allowance*s for each *control period* unless a request to reallocate *NOx allowance*s has been *submit*ted by the *NOx authorized account representative* or alternate *NOx authorized account representative* in accordance with Section 13 of this regulation.

d. Appendix A of this regulation identifies the *NOx Budget unit*s and the number of *NOx allowance*s each *NOx Budget unit* is *allocated* for each NOx *control period* beginning with the year 2003 control period. NOx *control period NOx allowance allocation*s were determined as follows:

1. The *NOx allowance allocation* for any *unit* under Section 2(a)(1) of this regulation was determined as follows:

i. The *unit*'s base *heat input* was determined as the *unit*'s average *heat input* of the two highest *heat inputs* of any of the three years 1995, 1996, and 1997.

ii. The *unit*=s base *heat input* determined in Section 9(d)(1)(i) of this regulation was multiplied by a NOx emissions rate factor, the product divided by 2000 lb/*ton*, and the result rounded to the nearest whole *ton* to determine the *unit*=s base *NOx allowance allocation*.

A. If the *unit* serves a *generator* with a *nameplate capacity* of 25 MWe or greater, the NOx emissions rate factor was 0.15 lb/MMBTU.

B. If the *unit* serves a *generator* with a *nameplate capacity* of 15 MWe or greater, but less than 25 MWe, the NOx emissions rate factor for that *unit* was the *unit*=s actual average 1996 ozone season NOx emission rate, in lb/MMBTU.

iii. The base *NOx allowance allocation*s determined in Section 9(d)(1)(ii) of this regulation for all subject *unit*s were added together.

iv. The total base *NOx allowance allocation* determined in Section 9(d)(1)(iii) of this regulation was subtracted from the number of *NOx allowances allocate*d to the state by EPA for this particular population of *unit*s. Delaware=s *NOx allowance allocation* for this population of *unit*s was 4474 *NOx allowances*.

v. For each subject *unit*, its base *NOx allowance allocation* determined in Section 9(d)(1)(ii) of this regulation was divided by the total base *NOx allowance allocation* for all subject *unit*s as determined in Section 9(d)(1)(iii) of this regulation.

vi. For each subject *unit*, the factor determined in Section 9(d)(1)(v) of this regulation was multiplied by the *NOx allowance* value determined in Section 9(d)(1)(iv) of this regulation to obtain the *NOx allowance allocation* correction.

vii. The final *NOx allowance allocation* to each subject *unit* was determined as the sum of the base *NOx allowance allocation* for the *unit* determined in Section 9(d)(1)(ii) of this regulation and the *NOx allowance allocation* correction for that *unit* determined in Section 9(d)(1)(vi) of this regulation.

2. The *NOx allowance allocation* for any *unit* under Section 2(a)(2) of this regulation was determined as follows:

i. The *unit*=s base *heat input* was determined as the *unit*=s average *heat input* of the two highest *heat inputs* of any of the three years 1995, 1996, and 1997.

ii. The *unit*=s base *heat input* determined in Section 9(d)(2)(i) of this regulation was multiplied by a NOx emissions rate factor of 0.17 lb/MMBTU, the product divided by 2000 lb/*ton*, and the result rounded to the nearest whole *ton* to determine the *unit*=s base *NOx allowance allocation*.

iii. The base *NOx allowance allocation*s determined in Section 9(d)(2)(ii) of this regulation for all subject *unit*s were added together.

iv. The total base *NOx allowance allocation* determined in Section 9(d)(2)(iii) of this regulation was subtracted from the number of *NOx allowances allocate*d to the state by EPA for this particular population of *unit*s. Delaware=s *NOx allowance allocation* for this population of *unit*s was 753 *NOx allowances*. The results of this calculation could be positive or negative.

v. For each subject *unit*, its base *NOx allowance allocation* determined in Section 9(d)(2)(ii) of this regulation was divided by the total base *NOx allowance allocation* for all subject *unit*s as determined in Section 9(d)(2)(iii) of this regulation.

vi. For each subject *unit*, the factor determined in Section 9(d)(2)(v) of this regulation was multiplied by the *NOx allowance* value determined in Section 9(d)(2)(iv) of this regulation to obtain the *NOx allowance allocation* correction.

vii. The final *NOx allowance allocation* to each subject *unit* was determined as the sum of the base *NOx allowance allocation* for the *unit* determined in Section 9(d)(2)(ii) of this regulation and the *NOx allowance allocation* correction for that *unit* determined in Section 9(d)(2)(vi) of this regulation.

3. The EPA=s *NOx allowance allocation* to Delaware for subject *unit*s was determined as follows:

i. The *NOx allowance allocation* for any *unit* that serves a *generator* with a *nameplate capacity* of 25MWe or greater was calculated as that *unit*=s actual 1996 *control period heat input* multiplied by a NOx emissions rate factor of 0.15 lb/MMBTU, multiplied by a state specific growth factor (1.27 for the state of Delaware), divided by 2000 lb/*ton*, and rounded to the nearest whole *ton*.

ii. The *NOx allowance allocation* for any *unit* that serves a *generator* with a *nameplate capacity* of 15 MWe or greater, but less than 25 MWe, was calculated as that *unit*=s actual 1996 *control period heat input* multiplied by that *unit*=s actual 1996 *control period* average NOx emissions rate, multiplied by a state specific growth factor (1.27 for the state of Delaware), divided by 2000 lb/*ton*, and rounded to the nearest whole *ton*.

iii. The *NOx allowance allocation* for any *unit* with a *maximum design heat input* rating of 250 MMBTU/hr, or greater, and is not a *unit* under Section 9(d)(3)(i) or 9(d)(3)(ii) of this regulation, was calculated as the actual 1995 NOx mass emissions (corrected to represent uncontrolled NOx emissions where applicable), in *ton*s, multiplied by a state/SIC code specific growth factor, reduced by SCC code specific emissions reduction percentages, and rounded to the nearest whole *ton*.

4. The *NOx allowance allocation* for any *unit* that chooses to become an *opt-in unit*, under this regulation, is determined in accordance with Section 15 of this regulation.

5. The *NOx allowance allocation* for any *unit* that chose to become an *opt-in unit* under Regulation 37 of the State of Delaware=s ARegulations Governing the Control of

Air Pollution@, shall remain unchanged as an *opt-in unit* under this regulation.

Section 10 - NOx Allowance Tracking System

a. The *Administrator* will assign a unique identifying number to each account established under Section 10(c) or Section 10(d) of this regulation.

b. The *Administrator* will assign a unique identifying number to each *NOx authorized account representative* or the alternate *NOx authorized account representative*.

c. Establishment of compliance and *overdraft account*s.

1. Upon *receipt of* a complete *account certificate of representation* under Section 6 of this regulation, the *Administrator* will establish a *compliance account* for each *NOx Budget unit* for which the *account certificate of representation* was *submit*ted.

2. Upon *receipt of* a complete *account certificate of representation* under Section 6 of this regulation, the *Administrator* will establish an *overdraft account* for each *source* for which the *account certificate of representation* was *submit*ted and that has two or more *NOx Budget unit*s.

3. *Allocation*s of *NOx allowance*s pursuant to Section 9 or Section 15 of this regulation and deductions or transfers of *NOx allowance*s pursuant to Section 8, Section 10(g), Section 11, Section 13, Section 15, or Section 16 of this regulation will be *recorded* in the *compliance account*s or *overdraft account*s in accordance with the requirements of Section 10 of this regulation.

d. Establishment of *general account*s

1. Any person may apply to open a *general account* for the purpose of holding and transferring allowances. A complete application for a *general account* shall be *submit*ted to the *Administrator* and shall include the following elements in a format prescribed by the *Administrator*:

i. Name, mailing address, e-mail address (if any), telephone number, and facsimile transmission number (if any) of the *NOx authorized account representative* and any alternate *NOx authorized account representative*;

ii. At the option of the *NOx authorized account representative* or the alternate *NOx authorized account representative*, organization name and type of organization;

iii. A list of all persons subject to a binding agreement for the *NOx authorized account representative* or any alternate *NOx authorized account representative* to represent their ownership interest with respect to the allowances held in the *general account*;

iv. The following certification statement by the *NOx authorized account representative* and any alternate *NOx authorized account representative*: ``I certify that I was selected as the *NOx authorized account representative* or the NOx alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to allowances held in the *general account*. I certify that I have all the necessary authority to carry out my duties and responsibilities under the *NOx Budget Trading Program* on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the *Administrator* or a court regarding the *general account*."

v. The signature of the *NOx authorized account representative* and any alternate *NOx authorized account representative* and the dates signed.

vi. Unless otherwise required by the *Department* or the *Administrator*, documents of agreement referred to in the *account certificate of representation* shall not be *submit*ted to the *Department* or the *Administrator*. Neither the *Department* nor the *Administrator* shall be under any obligation to review or evaluate the sufficiency of such documents, if *submit*ted.

2. Upon receipt by the *Administrator* of a complete application for a *general account* under Section 10(d)(1) of this regulation:

i. The *Administrator* will establish a *general account* for the person or persons for whom the application is *submit*ted.

ii. The *NOx authorized account representative* and any alternate *NOx authorized account representative* for the *general account* shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each person who has an ownership interest with respect to *NOx allowances held* in the *general account* in all matters pertaining to the *NOx Budget Trading Program*, not withstanding any agreement between the *NOx authorized account representative* or any alternate *NOx authorized account representative* and such person. Any such person shall be bound by any order or decision issued to the *NOx authorized account representative* or any alternate *NOx authorized account representative* by the *Administrator* or a court regarding the *general account*.

iii. Each submission concerning the *general account* shall be *submit*ted, signed, and certified by the *NOx authorized account representative* or any alternate *NOx authorized account representative* for the persons having an ownership interest with respect to *NOx allowances held* in the *general account*. Each such submission shall include the following certification statement by the *NOx authorized account representative* or any alternate *NOx authorized account representative*: ``I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the *NOx allowance*s held in the *general account*. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with

primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

iv. The *Administrator* will accept or act on a submission concerning the *general account* only if the submission has been made, signed, and certified in accordance with Section 10(d)(2)(iii) of this regulation.

3. An application for a *general account* may designate one and only one *NOx authorized account representative* and one and only one alternate *NOx authorized account representative* who may act on behalf of the *NOx authorized account representative*. The agreement by which the alternate *NOx authorized account representative* is selected shall include a procedure for authorizing the alternate *NOx authorized account representative* to act in lieu of the *NOx authorized account representative*.

4. Reserved.

5. Upon receipt by the *Administrator* of a complete application for a *general account* under Section 10(d)(1) of this regulation, any representation, action, inaction, or submission by any alternate *NOx authorized account representative* shall be deemed to be a representation, action, inaction, or submission by the *NOx authorized account representative*.

6. The *NOx authorized account representative* for a *general account* may be changed at any time upon receipt by the *Administrator* of a superseding complete application for a *general account* under Section 10(d)(1) of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous *NOx authorized account representative* prior to the time and date when the *Administrator receive*s the superseding application for a *general account* shall be binding on the new *NOx authorized account representative* and the persons with an ownership interest with respect to the allowances in the *general account.*

7. The alternate *NOx authorized account representative* for a *general account* may be changed at any time upon receipt by the *Administrator* of a superseding complete application for a *general account* under Section 10(d)(1) of this regulation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous alternate *NOx authorized account representative* prior to the time and date when the *Administrator receive*s the superseding application for a *general account* shall be binding on the new alternate *NOx authorized account representative* and the persons with an ownership interest with respect to the allowances in the *general account*.

8. In the event a new person having an ownership interest with respect to *NOx allowance*s in the *general account* is not included in the list of such persons in the *account certificate of representation*, such new person shall be deemed to be subject to and bound by the *account certificate of representation*, the representation, actions, inactions, and submissions of the *NOx authorized account representative* and any alternate *NOx authorized account representative* of the *source* or *unit*, and the decisions, orders, actions, and inactions of the *Administrator*, as if the new person were included in such list.

9. Within 30 days following any change in the persons having an ownership interest with respect to *NOx allowance*s in the *general account*, including the addition of persons, the *NOx authorized account representative* or any alternate *NOx authorized account representative* shall *submit* a revision to the application for a *general account* amending the list of persons having an ownership interest with respect to the *NOx allowance*s in the *general account* to include the change.

10. Once a complete application for a *general account* under Section 10(d)(1) of this regulation has been *submit*ted and *receive*d, the *Administrator* will rely on the application unless and until a superseding complete application for a *general account* under Section 10(d)(1) of this regulation is *receive*d by the *Administrator.*

11. Except as provided in Section 10(d)(6) through Section 10(d)(9) of this regulation, no objection or other communication *submit*ted to the *Administrator* concerning the authorization, or any representation, action, inaction, or submission of the *NOx authorized account representative* or any alternate *NOx authorized account representative* for a *general account* shall affect any representation, action, inaction, or submission of the *NOx authorized account representative* or any alternate *NOx authorized account representative* or the finality of any decision or order by the *Administrator* under the *NOx Budget Trading Program*.

12. The *Administrator* will not adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of the *NOx authorized account representative* or any alternate *NOx authorized account representative* for a *general account*, including private legal disputes concerning the proceeds of *NOx allowance* transfers.

13. Transfers of allowances pursuant to Section 13 of this regulation will be *recorded* in the *general account* in accordance with Section 10 of this regulation.

14. Closing of *general account*s

i. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *general account* may instruct the *Administrator* to close the *general account* by *submit*ting a statement requesting deletion of the *general account* from the *NOx Allowance Tracking System* and by correctly

*submit*ting for *recordation* under Section 13 of this regulation an *NOx allowance transfer* of all *NOx allowance*s in the *general account* to one or more other *NOx Allowance Tracking System account*s.

ii. If a *general account* shows no activity for a period of a year or more and does not contain any *NOx allowance*s, the *Administrator* may notify the *NOx authorized account representative* for the *general account* that the *general account* will be closed and deleted from the *NOx Allowance Tracking System* following 20 business days after the notice is sent. The *general account* will be closed after the 20-day period unless before the end of the 20-day period the *Administrator receive*s a correctly *submit*ted transfer of *NOx allowance*s into the *general account* under Section 13 of this regulation or a statement *submit*ted by the *NOx authorized account representative* or the alternate *NOx authorized account representative* demonstrating to the satisfaction of the *Administrator* good cause as to why the *general account* should not be closed.

e. Following the establishment of a *NOx Allowance Tracking System account*, all submissions to the *Administrator* pertaining to the account, including, but not limited to, submissions concerning the deduction or transfer of *NOx allowance*s in the account, shall be made only by the *NOx authorized account representative* or the alternate *NOx authorized account representative* for the account.

f. *Recordation* of *NOx allowance allocation*s

1. The *Administrator* will *record* the *NOx allowance*s for 2003 in the *NOx Budget unit*s' *compliance account*s, as *allocated* under Section 9 of this regulation, and any allowance *allocation* from the compliance supplement pool under Section 12(c) of this regulation. The *Administrator* will also *record* the *NOx allowance*s *allocated* under Section 15 of this regulation for each *NOx Budget opt-in source* in its *compliance account*.

2. Each year, after the *Administrator* has made all deductions from a *NOx Budget unit*'s *compliance account* and the *overdraft account* pursuant to Section 11 of this regulation, the *Administrator* will *record NOx allowance*s, as *allocated* to the *unit* under Section 9 of this regulation or under Section 15 of this regulation, in the *compliance account* for the year after the last year for which allowances were previously *allocated* to the *compliance account*.

3. When allocating *NOx allowance*s to and recording them in an account, the *Administrator* will assign each *NOx allowance* a unique identification *serial number* that will include digits identifying the year for which the *NOx allowance* is *allocated*.

g. The *Administrator* may, at his or her sole discretion and on his or her own motion, correct any error in any *NOx Allowance Tracking System account*. Within 10 business days of making such correction, the *Administrator* will notify the *NOx authorized account representative* for the account.

Section 11 - End-of-Season Reconciliation

a. The *NOx allowance*s are available to be deducted for compliance with a *unit*'s *NOx Budget emissions limitation* for a control period in a given year only if the *NOx allowance*s:

1. Were *allocated* for a *control period* in a prior year or the same year; and

2. Are held in the *unit*'s *compliance account*, or the *overdraft account* of the *source* where the *unit* is located, as of the *NOx allowance transfer deadline* for that *control period* or are transferred into the *compliance account* or *overdraft account* by a *NOx allowance* transfer correctly *submit*ted for *recordation* under Section 13 of this regulation by the *NOx allowance transfer deadline* for that *control period*.

b. Deductions for compliance.

1. Following the *recordation*, in accordance with Section 13 of this regulation, of *NOx allowance* transfers *submit*ted for *recordation* in the *unit*'s *compliance account* or the *overdraft account* of the *source* where the *unit* is located by the *NOx allowance transfer deadline* for a *control period*, the *Administrator* will *deduct NOx allowance*s available under Section 11(a) of this regulation to cover the *unit*'s NOx *emissions* (as determined in accordance with Section 14 and Section 15(l) of this regulation) for the *control period*:

i. From the *compliance account*; and

ii. Only if no more *NOx allowance*s available under Section 11(a) of this regulation remain in the *compliance account*, from the *overdraft account*. In deducting allowances for *unit*s at the *source* from the *overdraft account*, the *Administrator* will begin with the *unit* having the *compliance account* with the lowest *NOx Allowance Tracking System account number* and end with the *unit* having the *compliance account* with the highest *NOx Allowance Tracking System account number* (with *account number*s sorted beginning with the left-most character and ending with the right-most character and the letter characters assigned values in alphabetical order and less than all numeric characters).

2. The *Administrator* will *deduct NOx allowance*s first under Section 11(b)(1)(i) of this regulation and then under Section 11(b)(1)(ii) of this regulation:

i. Until the number of *NOx allowance*s deducted for the *control period* equals the number of *tons* of NOx *emissions*, determined in accordance with Section 14 of this regulation, from the *unit* for the *control period* for which compliance is being determined for the *control period*; or

ii. Until no more *NOx allowance*s available under Section 11(a) of this regulation remain in the respective account.

c. The *NOx authorized account representative* or the alternate *NOx authorized account representative* for each *compliance account* may identify by *serial number* the *NOx*

*allowance*s to be deducted from the *unit*'s *compliance account* under Section 11(b), Section 11(d), or Section 16 of this regulation.

1. Such identification shall be made in the *compliance certification* report *submit*ted in accordance with Section 8 of this regulation.

2. In the absence of an identification or in the case of a partial identification of *NOx allowance*s by *serial number*, the *Administrator* will *deduct NOx allowances* for a *control period* from the *compliance account* or the *overdraft account* on a first-in, first-out (FIFO) accounting basis in the following order:

i. Those *NOx allowance*s that were *allocated* for the *control period* to the *unit* under Section 9, Section 12, or Section 15 of this regulation;

ii. Those *NOx allowance*s that were *allocated* for the *control period* to any *unit* and transferred and *recorded* in the account pursuant to Section 13 of this regulation, in order of their date of *recordation*;

iii. Those *NOx allowance*s that were *allocated* for a prior *control period* to the *unit* under Section 9, Section 12, or Section 15 of this regulation; and

iv. Those *NOx allowance*s that were *allocated* for a prior *control period* to any *unit* and transferred and *recorded* in the account pursuant to Section 13 of this regulation, in order of their date of *recordation*.

d. Deductions for *unit*s sharing a *common stack*. In the case of *unit*s sharing a *common stack* and having *emissions* that are not separately monitored or apportioned in accordance with Section 14 of this regulation:

1. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of the *unit*s may identify the percentage of *NOx allowance*s to be deducted from each such *unit*'s *compliance account* to cover the *unit*'s share of NOx *emissions* from the *common stack* for a *control period*. Such identification shall be made in the *compliance certification* report *submit*ted in accordance with Section 8 of this regulation.

2. Notwithstanding Section 11(b)(2) of this regulation, the *Administrator* will *deduct NOx allowances* for each such *unit* until the number of *NOx allowance*s deducted equals the *unit*'s identified percentage (under Section 11(d)(1) of this regulation) of the number of *tons* of NOx *emissions*, as determined in accordance with Section 14 of this regulation, from the *common stack* for the *control period* for which compliance is being determined or, if no percentage is identified, an equal percentage for each such *unit* for the *control period*.

e. The *Administrator* will *record* in the appropriate *compliance account* or *overdraft account* all deductions from such an account pursuant to Section 11(b), Section 11(d), or Section 16 of this regulation.

Section 12 - Banking

a. *NOx allowance*s may be banked for future use or transfer in a *compliance account*, an *overdraft account*, or a *general account*, as follows:

1. Any *NOx allowance* that is held in a *compliance account*, an *overdraft account*, or a *general account* will remain in such account unless and until the *NOx allowance* is deducted or transferred under Section 8, Section 10(g), Section 11, Section 13, Section 15, or Section 16 of this regulation.

2. The *Administrator* will designate, as a ``banked'' *NOx allowance*, any *NOx allowance* that remains in a *compliance account*, an *overdraft account*, or a *general account* after the *Administrator* has made all deductions for a given *control period* from the *compliance account* or *overdraft account* pursuant to Section 11 and Section 16 of this regulation.

b. Each year starting in 2004, after the *Administrator* has completed the designation of banked *NOx allowance*s under Section 12(a)(2) of this regulation and before May 1 of the year, the *Administrator* will determine the extent to which banked *NOx allowance*s may be used for compliance in the *control period* for the *current year*, as follows:

1. The *Administrator* will determine the total number of banked *NOx allowances held* in *compliance account*s, *overdraft account*s, or *general account*s.

2. If the total number of banked *NOx allowance*s determined, under Section 12(b)(1) of this regulation, to be held in *compliance account*s, *overdraft account*s, or *general account*s is less than or equal to 10% of the sum of the *State trading program budget*s for the *control period* for the *State*s in which *NOx Budget unit*s are located, any banked *NOx allowance* may be deducted for compliance in accordance with Section 11 of this regulation.

3. If the total number of banked *NOx allowance*s determined, under Section 12(b)(1) of this regulation, to be held in *compliance account*s, *overdraft account*s, or *general account*s exceeds 10% of the sum of the *State trading program budget*s for the *control period* for the *State*s in which *NOx Budget unit*s are located, any *banked allowance* may be deducted for compliance in accordance with Section 11 of this regulation, except as follows:

i. The *Administrator* will determine the following ratio: 0.10 multiplied by the sum of the *State trading program budget*s for the *control period* for the *State*s in which *NOx Budget unit*s are located and divided by the total number of banked *NOx allowance*s determined, under Section 12(b)(1) of this regulation, to be held in *compliance account*s, *overdraft account*s, or *general account*s.

ii. The *Administrator* will multiply the number of banked *NOx allowance*s in each *compliance account* or *overdraft account* by the ratio calculated under Section 12(b)(3)(i) of this regulation. The resulting product is the number of banked *NOx allowance*s in the account that may be deducted for compliance in accordance with Section

11 of this regulation. Any banked *NOx allowance*s in excess of the resulting product may be deducted for compliance in accordance with Section 11 of this regulation, except that, if such *NOx allowance*s are used to make a deduction, two such *NOx allowance*s must be deducted for each deduction of one *NOx allowance* required under Section 11 of this regulation.

c. The *Department* may *allocate* up to 127 *NOx allowance*s for the *NOx Budget Trading Program* in 2003 as Delaware=s portion of the compliance supplement pool.

1. The *NOx authorized account representative* or alternate *NOx authorized account representative* may request an *allocation* of *NOx allowances* from Delaware=s portion of the compliance supplement pool in accordance with the requirements of Section 12(c)(1)(i) and/or Section 12(c)(1)(ii):

i. The *NOx budget unit* may reduce its NOx emissions rate in the 2001 or 2002 *control period* and request early reduction *NOx allowances* in accordance with the following requirements:

A. Each *NOx budget unit* for which early reduction *NOx allowances* are requested shall monitor and report NOx emissions, NOx emissions rate, and *heat input* in accordance with 40 CFR Part 75 and Section 14 of this regulation starting in the year 2000 *control period*, and for each *control period* for which such early reduction *NOx allowances* are requested. The *unit*=s monitoring system availability shall be not less than 90 percent during the year 2000 *control period*, and the *unit* must be in compliance with any applicable state or federal emissions or emissions-related requirements.

B. Each *NOx budget unit* for which early reduction *NOx allowances* are requested shall reduce its NOx emissions rate, for each *control period* for which early reduction *NOx allowances* are requested, to less than both 0.25 lb/MMBTU and 80% of the *unit*=s actual NOx emission rate in the year 2000 *control period*.

C. The *NOx authorized account representative* or alternate *NOx authorized account representative* of a *NOx budget unit* that meets the requirements of Section 12(c)(1)(i)(A) and 12(c)(1)(i)(B) may submit to the *Department* a request for early reduction *NOx allowances* for the *unit* based on NOx emission rate reductions made by the *unit* in the *control period* for 2001 and/or 2002. The submitted request shall include, at a minimum, the following information:

1. Identification of the affected *NOx budget source* and *NOx Budget unit*.

2. Identification of the calendar time period for which early reduction *NOx allowances* are being requested (i.e. May 1 - September 30, 2001, May 1 - September 30, 2002, or both).

3. Identification of the year 2000 *control period* NOx emissions rate, in lb/MMBTU.

4. Identification of the *control period* NOx emissions rate, in lb/MMBTU, for the *control period*(s) for which early reduction *NOx allowances* are requested.

5. Identification of the *control period heat input*, in MMBTU, for the *control period*(s) for which early reduction *NOx allowances* are requested.

6. Identification of the quantity of early reduction *NOx allowances* requested, determined for each applicable control period by multiplying the *unit*=s *heat input* for such *control period* by the difference between 0.25 lb/MMBTU and the *unit*=s actual NOx emission rate for such *control period*, divided by 2000 lb/ton, and rounded to the nearest ton.

7. Certification by the *NOx authorized account representative* or alternate *NOx authorized account representative*.

ii. The *NOx authorized account representative* or alternate *NOx authorized account representative* of a Delaware *source* whose *compliance account*, under Regulation 37 of Delaware=s ARegulations Governing the Control of Air Pollution@, holds allowances for the control periods of calendar years 2000, 2001, or 2002 that were banked in accordance with the provisions of Regulation 37 as of February 1, 2003, may apply to the *Department* for distribution of allowances from Delaware=s portion of the compliance supplement pool.

A. The application shall include the following information:

1. Identification of the affected *NOx Budget source* and *NOx Budget unit*;

2. Identification of the quantity of *banked allowance*s remaining in the *unit*=s Regulation 37 *compliance account* as of February 1, 2003;

3. Identification by *serial number* of all *banked allowance*s remaining in the *unit*=s Regulation 37 *compliance account* as of February 1, 2003; and

4. Certification by the *NOx authorized account representative* or alternate *NOx authorized account representative*.

iii. The application for distribution of compliance supplement pool allowances must be *receive*d by the *Department* no later than March 1, 2003.

2. The *Department* shall review any application for distribution of compliance supplement pool allowances for accuracy and take the following action:

i. If the *Department* finds that the request is not accurate or *submit*ted in accordance with Section 12(c)(1) of this regulation, the *Department* shall notify the *NOx authorized account representative* that the request has been denied, including the reason(s) for any denial, no later than April 1, 2003.

ii. If the *Department* accepts the request, the *Department* shall notify the *NOx authorized account*

representative of acceptance no later than April 1, 2003, and *allocate* compliance supplement pool allowances to the *NOx Budget unit*=s *compliance account* in accordance with the provisions of Section 12(c)(3) of this regulation.

3. *NOx Budget unit*s that have *submit*ted a request for distribution of compliance supplement pool allowances acceptable to the *Department*, shall be *allocated NOx allowance*s from Delaware=s portion of the compliance supplement pool as follows:

i. If the total number of compliance supplement pool allowances requested for allocation, and as approved by the Department, totaled among all Delaware NOx Budget sources is 127 or less;

A. The *Department* shall *allocate* to each subject *source* a *NOx allowance allocation* from the compliance supplement pool at the rate of one compliance supplement pool allowance for each requested compliance supplement pool allowance.

B. The *Department* shall retire any compliance supplement pool allowance remaining in Delaware=s compliance supplement pool following distribution under Section 12(c)(3)(i)(A) of this regulation.

ii. If the total number of compliance supplement pool allowances requested for allocation, and as approved by the Department, totaled among all Delaware *NOx Budget source*s is greater than 127, the *Department* will *allocate* compliance supplement pool allowances according to the following formula:

Unit=s compliance supplement pool *allocation* = [(*Unit*=s requested and approved compliance supplement pool allowances)/ (Total number of requested and approved compliance supplement pool allowances among all Delaware *source*s)] X (127)

where: A*Unit*=s requested and approved compliance supplement pool allowances@ is the number of compliance supplement pool allowances requested by the unit=s NOx authorized account representative or alternate NOx authorized account representative and approved by the Department in accordance Section 12(c)(1)_and 12(c)(2) of this regulation.

ATotal number of requested and approved compliance supplement pool allowances among all Delaware sources@ is the sum total of all compliance supplement pool allowances requested in accordance with Section 12(c)(1) of this regulation, and approved by the Department in accordance with Section 12(c)(2) of this regulation, among all Delaware sources.

A127@ is the number of compliance supplement pool allowances *allocated* to Delaware by the EPA.

A*Unit*=s compliance supplement pool *allocation*@ shall be whole number allowances only, with all fractional *allocation*s rounded down to the next whole allowance.

4. No later than May 1, 2003, the *Department* will *submit* to the *Administrator* for *recordation* the *allocation*s of *NOx allowance*s determined under Section 12(c)(3) of this regulation.

5. *NOx allowance*s *recorded* under Section 12(c)(4) of this regulation may be deducted for compliance under Section 11 of this regulation for the *control period*s in 2003 or 2004. Notwithstanding Section 12(a) of this regulation, the *Administrator* will deduct as retired any *NOx allowance* that is *recorded* under Section 12(c)(4) of this regulation and is not deducted for compliance in accordance with Section 11 of this regulation for the *control period* in 2003 or 2004.

6. *NOx allowance*s *recorded* under Section 12(c)(4) of this regulation are treated as *banked allowance*s in 2004 for the purposes of Section 12(a) and Section 12(b) of this regulation.

Section 13 - NOx Allowance Transfers

a. The *NOx authorized account representative* or alternate *NOx authorized account representative* seeking *recordation* of a *NOx allowance* transfer shall *submit* the transfer to the *Administrator.* To be considered correctly *submit*ted, the *NOx allowance* transfer shall include the following elements in a format specified by the *Administrator*:

1. The numbers identifying both the transferor and transferee accounts;

2. A specification by *serial number* of each *NOx allowance* to be transferred; and

3. The printed name and signature of the *NOx authorized account representative* of the transferor account and the date signed.

b. Within 5 business days of receiving a *NOx allowance* transfer, except as provided in Section 13(c) of this regulation, the *Administrator* will *record* a *NOx allowance* transfer by moving each *NOx allowance* from the transferor account to the transferee account as specified by the request, provided that:

1. The transfer is correctly *submit*ted under Section 13 of this regulation;

2. The transferor account includes each *NOx allowance* identified by *serial number* in the transfer; and

3. The transfer meets all other requirements of this section.

c. A *NOx allowance transfer* that is *submit*ted for *recordation* following the *NOx allowance transfer deadline* and that includes any *NOx allowance*s *allocated* for a *control period* prior to or the same as the *control period* to which the *NOx allowance transfer deadline* applies will not be *recorded* until after completion of the process of *recordation*

of *NOx allowance allocation*s in Section 10(f) of this regulation.

d. Where a *NOx allowance* transfer *submit*ted for *recordation* fails to meet the requirements of Section 13(b) of this regulation, the *Administrator* will not *record* such transfer.

e. Within 5 business days of *recordation* of a *NOx allowance* transfer under Section 13 of this regulation, the *Administrator* will notify each party to the transfer. Notice will be given to the *NOx authorized account representative*s of both the transferror and transferee accounts.

f. Within 10 business days of *receipt of* a *NOx allowance* transfer that fails to meet the requirements of Section 13(b) of this regulation, the *Administrator* will notify the *NOx authorized account representative*s of both accounts subject to the transfer of:

1. A decision not to *record* the transfer, and
2. The reasons for such non-*recordation*.

g. Nothing in this section shall preclude the submission of a *NOx allowance* transfer for *recordation* following notification of non-*recordation*.

h. The *NOx authorized account representative* or alternate *NOx authorized account representative* of a *compliance account* or a *general account* may request that some or all *allocated NOx allowance*s be transferred to another *compliance account* or *general account* for the *current year*, any future year, block of years, or for permanent reallocation.

1. For *control period*s for which *NOx allowance*s have already been *allocated* in accordance with the requirements of Section 9(b) of this regulation, the *NOx authorized account representative* or alternate *NOx authorized account representative* shall *submit* a *NOx allowance* transfer request to the *Administrator* in accordance with the provisions of Section 13(a) of this regulation.

2. For *control period*s for which *allocation*s have not been *submit*ted to the *Administrator* in accordance with the provisions of Section 9(b) of this regulation, the *NOx authorized account representative* or alternate *NOx authorized account representative* may *submit* to the *Department* a request to transfer some or all of the *NOx allowance*s *allocated* to the subject *compliance account* or *general account* for future *control period*s.

i. The *NOx authorized account representative* or alternate *NOx authorized account representative* seeking to transfer all or a portion of a *NOx allowance allocation* shall *submit* the *allocation* transfer request to the *Department*. To be considered correctly *submit*ted, the *NOx allowance allocation* transfer request shall include the following elements:

A. The numbers identifying both the transferor and transferee accounts;

B. A specification by *serial number* of each *NOx allowance* to be transferred (if applicable); and

C. The printed name and signature of the *NOx authorized account representative* of the transferor account and the date signed.

ii. The *Department* shall review all *submit*ted requests for *NOx allowance allocation* transfer.

A. Within 10 business days of *receipt of* a *NOx allowance allocation* transfer request that fails to meet the requirements of Section 13(h)(2)(i)of this regulation , the *Department* shall notify the *NOx authorized account representative*s of the accounts subject to the transfer of the decision to not approve the transfer request and the reason(s) for not approving the request.

B. Within 10 business days of *receipt of* a *NOx allowance allocation* transfer request that meets the requirements of Section 13(h)(2)(i) of this regulation, the *Department* shall notify the *NOx authorized account representative*s of the accounts subject to the transfer.

C. For *NOx allowance allocation* transfer requests that meet the requirements of Section 13(h)(2)(i) of this regulation, the *Department* shall revise the budget to reflect the change in *NOx allowance allocation*s.

Section 14 - Monitoring and Reporting

a. The *owner*s and *operator*s, and to the extent applicable, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget unit*, shall comply with the monitoring and reporting requirements as provided in Section 14 of this regulation and in 40 CFR Part 75. For purposes of complying with such requirements, the definitions in Section 3 of this regulation and in 40 CFR 72.2 shall apply, and the terms ``affected *unit*,'' ``designated representative,'' and ``*continuous emission monitoring system*'' (or ``*CEMS*'') in 40 CFR Part 75 shall be replaced by the terms ``*NOx Budget unit*,'' ``*NOx authorized account representative*,'' and ``*continuous emission monitoring system*'' (or ``*CEMS*''), respectively, as defined in Section 3 of this regulation.

b. Requirements for installation, certification, and data accounting. The *owner* or *operator* of each *NOx Budget unit* must meet the following requirements. These provisions also apply to a *unit* for which an application for a *NOx Budget opt-in permit* is *submit*ted and not denied or withdrawn, as provided in Section 15 of this regulation:

1. Install all *monitoring system*s required under Section 14 of this Regulation for monitoring NOx mass *emissions*. This includes all systems required to monitor NOx emission rate, NOx concentration, *heat input*, and flow, in accordance with 40 CFR 75.71 and 75.72.

2. Install all *monitoring system*s for monitoring *heat input*, if required under Section 14(n) of this regulation for developing *NOx allowance allocation*s.

3. Successfully complete all certification tests required under Section 14(e) of this regulation and meet all

other provisions of Section 14 of this regulation and 40 CFR Part 75 applicable to the *monitoring system*s under Sections 14(b)(1) and 14(b)(2) of this regulation.

4. Record, and report data from the *monitoring system*s under Sections 14(b)(1) and 14(b)(2) of this regulation.

c. The *owner* or *operator* must meet the requirements of Sections 14(b)(1) through 14(b)(3) of this regulation on or before the following dates and must record and report data on and after the following dates:

1. *NOx budget unit*s for which the *owner* or *operator* intends to apply for early reduction credits in accordance with Section 12(c)(1)(i) of this regulation must comply with the requirements of section 14 of this regulation by May 1, 2000.

2. *NOx Budget unit*s under Section 2 of this regulation that *commence operation* before January 1, 2002, must comply with the requirements of Section 14 of this regulation by May 1, 2002.

3. *Nox Budget unit*s under Section 2 of this regulation that *commence operation* on or after January 1, 2002 and that report on an annual basis under Section 14(k)(5) of this regulation must comply with the requirements of Section 14 of this regulation by the later of the following dates:

i. May 1, 2002; or

ii. The earlier of:

A. 180 days after the date on which the *unit* commences operation or,

B. For *unit*s under Section 2(a)(1) of this regulation, 90 days after the date on which the *unit* commences commercial operation.

4. *NOx Budget unit*s under Section 2 of this regulation that *commence operation* on or after January 1, 2002 and that report on a control season basis under Section 14(k)(5) of this regulation must comply with the requirements of Section 14 of this regulation by the later of the following dates:

i. The earlier of:

A. 180 days after the date on which the *unit* commences operation or,

B. For *unit*s under Section 2(a)(1) of this regulation, 90 days after the date on which the *unit* commences commercial operation.

ii. However, if the applicable deadline under Section 14(b)(4)(i) of this regulation does not occur during a *control period*, May 1; immediately following the date determined in accordance with Section 14(b)(4)(i) of this regulation.

5. For a *NOx Budget unit* with a new stack or flue for which construction is completed after the applicable deadline under Section 14(c)(1), Section 14(c)(2), Section 14(c)(3), or Section 15 of this regulation:

i. 90 days after the date on which *emissions* first exit to the atmosphere through the new stack or flue;

ii. However, if the *unit* reports on a control season basis under Section 14(k)(5) of this regulation and the applicable deadline under Section 14(c)(5)(i) of this regulation does not occur during the *control period*, May 1 immediately following the applicable deadline in Section 14(c)(b)(5)(i) of this regulation.

6. For a *unit* for which an application for a NOx Budget opt in permit is *submit*ted and not denied or withdrawn, the compliance dates specified under Section 15 of this regulation.

d. Reporting data prior to initial certification.

1. The *owner* or *operator* of a *NOx budget unit* that misses the certification deadline of Section 12(c)(1) of this regulation is not eligible to apply for early reduction credits. The *owner* or *operator* of the unit becomes subject to the certification deadline of Section 14(d)(2) of this regulation.

2. The *owner* or *operator* of a NOx Budget under Section 14(c)(3) or 14(c)(4) of this regulation must determine, record and report NOx mass, *heat input* (if required for purposes of *allocation*s) and any other values required to determine NOx Mass (e.g. NOx emission rate and *heat input* or NOx concentration and stack flow) using the provisions of 40 CFR 75.70(g), from the date and hour that the *unit* starts *operating* until all required certification tests are successfully completed.

e. Prohibitions.

1. No *owner* or *operator* of a *NOx Budget unit* monitored under 40 CFR 75.72(b)(2)(ii) shall use any alternative *monitoring system*, alternative *reference method*, or any other alternative for the required *continuous emission monitoring system* without having obtained prior written approval in accordance with Section 14(l) of this regulation.

2. No *owner* or *operator* of a *NOx Budget unit* monitored under 40 CFR 75.72(b)(2)(ii) shall operate the *unit* so as to discharge, or allow to be discharged, NOx *emissions* to the atmosphere without accounting for all such *emissions* in accordance with the applicable provisions of Section 14 of this regulation and 40 CFR Part 75 except as provided for in 40 CFR 75.74.

3. No *owner* or *operator* of a *NOx Budget unit* monitored under 40 CFR 75.72(b)(2)(ii) shall disrupt the *continuous emission monitoring system*, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NOx mass *emissions* discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of Section 14 of this regulation and 40 CFR Part 75 except as provided for in 40 CFR 75.74.

4. No *owner* or *operator* of a *NOx Budget unit* monitored under 40 CFR 75.72(b)(2)(ii) shall retire or

permanently discontinue use of the *continuous emission monitoring system*, any component thereof, or any other approved emission *monitoring system* under this subpart, except under any one of the following circumstances:

i. During the period that the *unit* is covered by a retired *unit* exemption under Section 2 of this regulation that is in effect;

ii. The *owner* or *operator* is monitoring *emissions* from the *unit* with another certified *monitoring system* approved, in accordance with the applicable provisions of Section 14 of this regulation and 40 CFR Part 75, by the *Department* for use at that *unit* that provides emission data for the same pollutant or parameter as the retired or discontinued *monitoring system*; or

iii. The *NOx authorized account representative* or the alternate *NOx authorized account representative submit*s notification of the date of certification testing of a replacement *monitoring system* in accordance with Section 14(e)(4) of this regulation.

f. Initial certification and recertification procedures

1. The *owner* or *operator* of a *NOx Budget unit* that is subject to an *Acid Rain emissions limitation* shall comply with the initial certification and recertification procedures of 40 CFR Part 75, except that:

i. If, prior to January 1, 1998, the *Administrator* approved a petition under 40 CFR 75.17(a) or (b) for apportioning the NOx emission rate measured in a *common stack* or a petition under 40 CFR 75.66 of this chapter for an alternative to a requirement in 40 CFR 75.17 of this chapter, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall re*submit* the petition to the *Administrator* under Section 14(l)(1) to determine if the approval applies under the *NOx Budget Trading Program*.

ii. For any additional *CEMS* required under the *common stack* provisions in 40 CFR 75.72, or for any NOx concentration *CEMS* used under the provisions of 40 CFR 75.71(a)(2), the *owner* or *operator* shall meet the requirements of Section 14(f)(2) of this regulation.

2. The *owner* or *operator* of a *NOx Budget unit* that is not subject to an *Acid Rain emissions limitation* shall comply with the following initial certification and recertification procedures, except that the *owner* or *operator* of a *unit* that qualifies to use the low mass *emissions* excepted monitoring methodology under 40 CFR 75.19 shall also meet the requirements of Section 14(g) of this regulation and the *owner* or *operator* of a *unit* that qualifies to use an alternative *monitoring system* under Subpart E of 40 CFR Part 75 shall also meet the requirements of Section 14(h) of this regulation. The *owner* or *operator* of a *NOx Budget unit* that is subject to an *Acid Rain emissions limitation*, but requires additional *CEMS* under the *common stack* provisions in 40 CFR 75.72, or that uses a NOx concentration *CEMS* under 40 CFR Part. 75.71(a)(2) also shall comply with the following initial certification and recertification procedures.

i. The *owner* or *operator* shall ensure that each *monitoring system* required by Subpart H of 40 CFR Part 75 (which includes the *automated data acquisition and handling system*) successfully completes all of the initial certification testing required under 40 CFR 75.20. The *owner* or *operator* shall ensure that all applicable certification tests are successfully completed by the deadlines specified in Section 14(c) of this regulation. In addition, whenever the *owner* or *operator* installs a *monitoring system* in order to meet the requirements of this part in a location where no such *monitoring system* was previously installed, initial certification according to 40 CFR 75.20 is required.

ii. Whenever the *owner* or *operator* makes a replacement, modification, or change in a certified *monitoring system* that the *Administrator* or the *Department* determines significantly affects the ability of the system to accurately measure or record NOx mass *emissions* or *heat input* or to meet the requirements of 40 CFR 75.21 or Appendix B to 40 CFR Part 75, the *owner* or *operator* shall recertify the *monitoring system* according to 40 CFR 75.20(b). Furthermore, whenever the *owner* or *operator* makes a replacement, modification, or change to the flue gas handling system or the *unit*'s operation that the *Administrator* or the *Department* determines to significantly change the flow or concentration profile, the *owner* or *operator* shall recertify the continuous *emissions monitoring system* according to 40 CFR 75.20(b). Examples of changes which require recertification include: replacement of the analyzer, change in location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

iii. Certification approval process for initial certifications and recertification.

A. Notification of certification. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* to the appropriate EPA Regional Office and the *Department* a written notice of the dates of certification in accordance with Section 14(k) of this regulation.

B. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* to the *Department* a certification application for each *monitoring system* required under Subpart H of 40 CFR Part 75. A complete certification application shall include the information specified in Subpart H of 40 CFR Part 75.

C. Except for *unit*s using the low mass emission excepted methodology under 40 CFR 75.19, the provisional certification date for a monitor shall be determined using the procedures set forth in 40 CFR 75.20(a)(3). A provisionally certified monitor may be used

under the *NOx Budget Trading Program* for a period not to exceed 120 days after receipt by the *Department* of the complete certification application for the *monitoring system* or component thereof under Section 14(f)(2)(iii)(B) of this regulation. Data measured and recorded by the provisionally certified *monitoring system* or component thereof, in accordance with the requirements of 40 CFR Part 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the *Department* does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of *receipt of* the complete certification application by the *Department*.

D. The *Department* will issue a written notice of approval or disapproval of the certification application to the *owner* or *operator* within 120 days of *receipt of* the complete certification application under Section 14(f)(2)(iii)(B) of this regulation. In the event the *Department* does not issue such a notice within such 120-day period, each *monitoring system* which meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application will be deemed certified for use under the *NOx Budget Trading Program*.

1. Approval notice. If the certification application is complete and shows that each *monitoring system* meets the applicable performance requirements of 40 CFR Part 75, then the *Department* will issue a written notice of approval of the certification application within 120 days of receipt.

2. A certification application will be considered complete when all of the applicable information required to be *submit*ted under Section 14(f)(2)(iii)(B) of this regulation has been *receive*d by the *Department*. If the certification application is not complete, then the *Department* will issue a written notice of incompleteness that sets a reasonable date by which the *NOx authorized account representative* or the alternate *NOx authorized account representative* must *submit* the additional information required to complete the certification application. If the *NOx authorized account representative* or the alternate *NOx authorized account representative* does not comply with the notice of incompleteness by the specified date, then the *Department* may issue a notice of disapproval under Section 14(f)(2)(iii)(D)(3) of this regulation.

3. If the certification application shows that any *monitoring system* or component thereof does not meet the performance requirements of this part, or if the certification application is incomplete and the requirement for disapproval under Section 14(f)(2)(iii)(D)(2) of this regulation has been met, the *Department* will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the *Department* and the data measured and recorded by each uncertified *monitoring system* or component thereof shall not be considered valid quality-assured data beginning with the date and hour of provisional certification. The *owner* or *operator* shall follow the procedures for loss of certification in Section 14(f)(2)(iii)(E) of this regulation for each *monitoring system* or component thereof which is disapproved for initial certification.

4. Audit decertification. The *Department* may issue a notice of disapproval of the certification status of a monitor in accordance with Section 14(j) of this regulation.

E. Procedures for loss of certification. If the *Department* issues a notice of disapproval of a certification application under Section 14(f)(2)(iii)(D)(3) of this regulation or a notice of disapproval of certification status under Section 14(f)(2)(iii)(D)(4) of this regulation, then:

1. The *owner* or *operator* shall substitute the following values, for each *hour of unit operation* during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i):

a. For *unit*s using or intending to monitor for NOx emission rate and *heat input* or for *unit*s using the low mass emission excepted methodology under 40 CFR 75.19, the *maximum potential NOx emission rate* and the *maximum potential hourly heat input* of the *unit*.

b. For *unit*s intending to monitor for NOx mass *emissions* using a NOx pollutant concentration monitor and a flow monitor, the maximum potential concentration of NOx and the maximum potential flow rate of the *unit* under Section 2.1 of Appendix A of 40 CFR Part 75.

2. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a notification of certification retest dates and a new certification application in accordance with Sections 14(f)(2)(iii)(A) and 14(f)(2)(iii)(B) of this regulation; and

3. The *owner* or *operator* shall repeat all certification tests or other requirements that were failed by the *monitoring system*, as indicated in the *Department*'s notice of disapproval, no later than 30 *unit operating day*s after the date of issuance of the notice of disapproval.

g. The *owner* or *operator* of a gas-fired or oil-fired *unit* using the low mass *emissions* excepted methodology under 40 CFR 75.19 shall meet the applicable general *operating* requirements of 40 CFR 75.10, the applicable requirements of 40 CFR 75.19, and the applicable certification requirements of Section 14 of this regulation, except that the excepted methodology shall be deemed provisionally certified for use under the *NOx Budget Trading Program*, as of the following dates:

1. For *unit*s that are reporting on an annual basis under Section 14(l)(5) of this regulation;

i. For a *unit* that has commences operation before its compliance deadline under Section 14(f)(2) of this regulation, from January 1 of the year following submission of the certification application for approval to use the low mass *emissions* excepted methodology under 40 CFR 75.19 until the completion of the period for the *Department* review; or

ii. For a *unit* that commences operation after its compliance deadline under Section 14(f)(2) of this regulation, the date of submission of the certification application for approval to use the low mass *emissions* excepted methodology under 40 CFR 75.19 until the completion of the period for *Department* review, or

2. For *unit*s that are reporting on a *control period* basis under Section 14(l)(5)(ii)(B) of this regulation:

i. For a unit that commenced operation before its compliance deadline under Section 14(f)(2) of this regulation, where the certification application is *submit*ted before May 1, from May 1 of the year of the submission of the certification application for approval to use the low mass *emissions* excepted methodology under 40 CFR 75.19 until the completion of the period for the *Department* review; or

ii. For a *unit* that commenced operation before its compliance deadline under Section 14(f)(2) of this regulation, where the certification application is *submit*ted after May 1, from May 1 of the year following submission of the certification application for approval to use the low mass *emissions* excepted methodology under 40 CFR Part. 75.19 until the completion of the period for the *Department* review; or

iii. For a *unit* that commences operation after its compliance deadline under Section 14(f)(2) of this regulation, where the *unit* commences operation before May 1, from May 1 of the year that the unit commenced operation, until the completion of the period for the *Department*'s review.

iv. For a *unit* that has not operated after its compliance deadline under Section 14(f)(2) of this regulation, where the certification application is *submit*ted after May 1, but before October 1st, from the date of submission of a certification application for approval to use the low mass *emissions* excepted methodology under 40 CFR 75.19 until the completion of the period for the *Department*'s review.

h. The *NOx authorized account representative* or the alternate *NOx authorized account representative* representing the *owner* or *operator* of each *unit* applying to monitor using an alternative *monitoring system* approved by the *Administrator* and, if applicable, the *Department* under Subpart E of 40 CFR Part 75 shall apply for certification to the *Department* prior to use of the system under the NOx Trading Program. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall apply for recertification following a replacement, modification or change according to the procedures in Section 14(f)(2) of this regulation. The *owner* or *operator* of an alternative *monitoring system* shall comply with the notification and application requirements for certification according to the procedures specified in Section 14(f)(2)(iii) of this regulation and 40 CFR 75.20(f).

i. Whenever any *monitoring system* fails to meet the quality assurance requirements of Appendix B of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

j. Audit decertification. Whenever both an audit of a *monitoring system* and a review of the initial certification or recertification application reveal that any system or component should not have been certified or recertified because it did not meet a particular performance specification or other requirement under Section 14(f) of this regulation or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the *Department* will issue a notice of disapproval of the certification status of such system or component. For the purposes of this paragraph, an audit shall be either a field audit or an audit of any information *submit*ted to the *Department* or the *Administrator*. By issuing the notice of disapproval, the *Department* revokes prospectively the certification status of the system or component. The data measured and recorded by the system or component shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the *owner* or *operator* completes subsequently approved initial certification or recertification tests. The *owner* or *operator* shall follow the initial certification or recertification procedures in Section 14(f) of this regulation for each disapproved system.

k. The *NOx authorized account representative* or the alternate *NOx authorized account representative* for a *NOx Budget unit* shall *submit* written notice to the *Department* and the *Administrator* in accordance with Section 13 of this regulation, except that if the *unit* is not subject to an *Acid Rain emissions limitation*, the notification is only required to be sent to the *Department*.

l. Recordkeeping and reporting.

1. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall comply with all recordkeeping and reporting requirements in this section and with the requirements of Section 5(a)(5) of this regulation.

2. If the *NOx authorized account representative* or the alternate *NOx authorized account representative* for a *NOx Budget unit* subject to an Acid Rain Emission limitation who signed and certified any submission that is made under

Subpart F or Subpart G of 40 CFR Part 75 and which includes data and information required under this regulation or Subpart H of 40 CFR Part 75 is not the same person as the designated representative or the alternative designated representative for the *unit* under 40 CFR Part 72, the submission must also be signed by the designated representative or the alternative designated representative.

3. Monitoring plans.

i. The *owner* or *operator* of a *unit* subject to an *Acid Rain emissions limitation* shall comply with requirements of 40 CFR 75.62, except that the monitoring plan shall also include all of the information required by Subpart H of 40 CFR Part 75.

ii. The *owner* or *operator* of a *unit* that is not subject to an *Acid Rain emissions limitation* shall comply with requirements of 40 CFR 75.62, except that the monitoring plan is only required to include the information required by Subpart H of 40 CFR Part 75.

4. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a certification application to the *Department* within 45 days after completing all initial certification or recertification tests required under Section 14(f) of this regulation including the information required under Subpart H of 40 CFR Part 75.

5. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* quarterly reports, as follows:

i. If a *unit* is subject to an Acid Rain emission limitation or if the *owner* or *operator* of the *NOx Budget unit* chooses to meet the annual reporting requirements of this Section 14(l)(5)(i), the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a quarterly report for each calendar quarter beginning with:

A. For *units* that elect to comply with the early reduction credit provisions of Section 12(c)(1)(i) of this regulation, the calendar quarter that includes the date of initial provisional certification in accordance with Section 14(f)(2)(iii)(C). Data shall be reported from the data and hour corresponding to the date and hour of provisional certification; or

B. For *unit*s commencing operation prior to May 1, 2002 the earlier of the calender quarter that includes the date of initial provisional certification under Section 14(f)(2)(iii)(c) of this regulation or, if the certification tests are not completed by May 1, 2002, the partial calender quarter from May 1, 2002 through June 30, 2002. Data shall be recorded and reported from the earlier of the date and hour corresponding to the date and hour of provisional certification or the first hour on May 1, 2002; or

C. For a *unit* that commences operation after May 1, 2002, the calendar quarter in which the *unit* commences operation, data shall be reported from the date and hour corresponding to when the *unit* commenced operation.

ii. If a *NOx Budget unit* is not subject to an Acid Rain emission limitation, then the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall either:

A. Meet all of the requirements of 40 CFR Part 75 related to monitoring and reporting NOx mass *emissions* during the entire year and meet the reporting deadlines specified in Section 14(l)(5)(i) of this regulation; or

B. *Submit* quarterly reports only for the periods from the earlier of May 1 or the date and hour that the *owner* or *operator* successfully completes all of the recertification tests required under 40 CFR 75.74(d)(3) through September 30 of each year in accordance with the provisions of 40 CFR 75.74(b). The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* a quarterly report for each calendar quarter, beginning with:

1. For *units* that elect to comply with the early reduction credit provisions of Section 12(c)(1)(i) of this regulation, the calendar quarter that includes the date of initial provisional certification in accordance with Section 14(f)(2)(iii)(C). Data shall be reported from the data and hour corresponding to the date and hour of provisional certification; or

2. For *unit*s commencing operation prior to May 1, 2002, the earlier of the calender quarter that includes the date of initial provisional certification under Section 14(f)(2)(iii)(C) of this regulation, or if the certification tests are not completed by May 1, 2002, the partial calender quarter from May 1, 2002 through June 30, 2002. Data shall be reported from the earlier of the date and hour corresponding to the date and hour of provisional certification or the first hour of May 1, 2002; or

3. For *unit*s that *commence operation* after May 1, 2002 during the *control period*, the calender quarter in which the *unit* commences operation. Data shall be reported from the date and hour corresponding to when the *unit* commenced operation; or

4. For *unit*s that *commence operation* after May 1, 2002 and before May 1 of the year in which the *unit* commences operation, the earlier of the calender quarter that includes the date of initial provisional certification under Section 14(f)(2)(iii)(C) of this regulation or, if the certification tests are not completed by May 1 of the year in which the *unit* commences operation, May 1 of the year in which the *unit* commences operation. Data shall be reported from the earlier of the date and hour corresponding to the date and hour of provisional certification or the first hour of May 1 of the year after the *unit* commences operation.

5. For *unit*s that *commence*

operation after May 1, 2002 and after September 30 of the year in which the *unit* commences operation, the earlier of the calender quarter that includes the date of initial provisional certification under Section 14(f)(2)(iii)(C) of this regulation or, if the certification tests are not completed by May 1 of the year after the *unit* commences operation, May 1 of the year after the *unit* commences operation. Data shall be reported from the earlier of the date and hour corresponding to the date and hour of provisional certification or the first hour of May 1 of the year after the *unit* commences operation.

iii. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* each quarterly report to the *Administrator* within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be *submit*ted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR 75.64.

A. For *unit*s subject to an *Acid Rain Emissions limitation*, quarterly reports shall include all of the data and information required in Subpart H of 40 CFR Part 75 for each *NOx Budget unit* (or group of *unit*s using a *common stack*) as well as information required in Subpart G of 40 CFR Part 75.

B. For *unit*s not subject to an *Acid Rain Emissions limitation*, quarterly reports are only required to include all of the data and information required in Subpart H of 40 CFR Part 75 for each *NOx Budget unit* (or group of *unit*s using a *common stack*).

iv. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall *submit* to the *Administrator* a *compliance certification* in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the *unit*'s *emissions* are correctly and fully monitored. The certification shall state that:

A. The monitoring data *submit*ted were recorded in accordance with the applicable requirements of this regulation and 40 CFR Part 75, including the quality assurance procedures and specifications; and

B. For a *unit* with add-on NOx emission controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emission controls were *operating* within the range of parameters listed in the monitoring plan and the substitute values do not systematically underestimate NOx *emissions*; and

C. For a *unit* that is reporting on a *control period* basis under Section 14(l)(5) of this regulation the NOx emission rate and NOx concentration values substituted for missing data under Subpart D of 40 CFR Part 75 of this chapter are calculated using only values from a *control period* and do not systematically underestimate NOx *emissions*.

m. Petitions

1. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget unit* that is subject to an *Acid Rain emissions limitation* may *submit* a petition under 40 CFR 75.66 to the *Administrator* requesting approval to apply an alternative to any requirement of Section 14 of this regulation.

i. Application of an alternative to any requirement of Section 14 of this regulation is in accordance with Section 14 of this regulation only to the extent that the petition is approved by the *Administrator*, in consultation with the *Department*.

ii. Notwithstanding Section 14(m)(1)(i) of this regulation, if the petition requests approval to apply an alternative to a requirement concerning any additional *CEMS* required under the *common stack* provisions of 40 CFR 75.72, the petition is governed by Section 14(m)(2) of this regulation.

2. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget unit* that is not subject to an *Acid Rain emissions limitation* may *submit* a petition under 40 CFR 75.66 to the *Department* and the *Administrator* requesting approval to apply an alternative to any requirement of Section 14 of this regulation.

i. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget unit* that is subject to an *Acid Rain emissions limitation* may *submit* a petition under 40 CFR 75.66 to the *Department* and the *Administrator* requesting approval to apply an alternative to a requirement concerning any additional *CEMS* required under the *common stack* provisions of 40 CFR 75.72 or a NOx concentration *CEMS* used under 40 CFR 75.71(a)(2).

ii. Application of an alternative to any requirement of Section 14 of this regulation is in accordance with Section 14 of this regulation only to the extent the petition under Section 14(m)(2) of this regulation is approved by both the *Department* and the *Administrator*.

n. Additional requirements to provide *heat input* data for *allocation*s purposes.

1. The *owner* or *operator* of a *unit* that elects to monitor and report NOx Mass emissions using a NOx concentration system and a flow system shall also monitor and report *heat input* at the *unit* level using the procedures set forth in 40 CFR Part 75 for any *source* located in a *state* developing *source allocation*s based upon *heat input*. Delaware is initially choosing to *allocate NOx allowance*s for the *NOx Budget Trading Program* based on *heat input*.

2. The *owner or operator* of a *unit* that monitor and report NOx mass emissions using a NOx concentration system and a flow system shall also monitor and report *heat input* at the unit level using the procedures set forth in 40 CFR Part 75 for any source that is applying for early

reduction credits in accordance with Section 12(c)(1)(i) of this regulation.

Section 15 - Individual Unit Opt-Ins

a. Any *unit* that is an *opt-in unit* in accordance with the requirements of Regulation 37, NOx Budget Program, of Delaware=s ARegulations Governing the Control of Air Pollution@, shall be required to meet the provisions for a NOx budget *opt-in unit* under this regulation. Unless otherwise noted, *opt-in unit*s under Regulation 37 shall meet all requirements for a NOx budget *opt-in unit* under Section 15 of this regulation.

b. A *unit* that is in the *State*, is not a *NOx Budget unit* under Section 2 (a)(1) or 2(a)(2) of this regulation and is not an *opt-in unit* under Section 15(a) of this regulation, can meet the emissions monitoring and reporting requirements of 40 CFR Part 75, and is *operating*, may qualify, under this subpart, to become a *NOx Budget opt-in source*. A *unit* that is a *NOx Budget unit*, is covered by a retired *unit* exemption under Section 2 of this regulation that is in effect, or is not *operating* is not eligible to become a *NOx Budget opt-in source*.

c. Except otherwise as provided in Section 15 of this regulation, a *NOx Budget opt-in source* shall be treated as a *NOx Budget unit* for purposes of applying Section 1 through Section 14, and Section 16, of this regulation.

d. A *unit* for which an application for a *NOx Budget opt-in permit* is *submit*ted and not denied or withdrawn, or a *NOx Budget opt-in source*, located at the same *source* as one or more *NOx Budget unit*s, shall have the same *NOx authorized account representative* as such *NOx Budget unit*s.

e. Applying for initial *NOx Budget opt-in permit.*

1. In order to apply for an initial *NOx Budget opt-in permit*, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *unit* qualified under Section 15(b) of this regulation may *submit* to the *Department* at any time:

i. A complete *NOx Budget permit* application under Section 7(c) of this regulation;

ii. A monitoring plan *submit*ted in accordance with Section 14 of this regulation;

iii. A complete *account certificate of representation* under Section 6 of this regulation, if no *NOx authorized account representative* has been previously designated for the *unit*;

iv. A description of the *opt-in unit*, including fuel type(s), maximum rated *heat input* capacity and electrical rating where applicable.

v. Documentation of the *opt-in baseline control period* mass *emissions* (in tons);

A. The *opt-in baseline control period emissions* shall be the average of the mass *emissions* from the immediately preceding two consecutive NOx *control period*s. If the mass *emissions* from the preceding two NOx *control period*s are not representative of normal operations, the *Department* may approve use of an alternative two consecutive NOx *control period*s within the five years preceding the date of the NOx budget *opt-in* permit application.

B. The documentation shall include:

1. Identification of the time period represented by the *emissions* data;

2. Quantification of the *opt-in baseline control period* mass *emissions* (in tons); and

3. A description of the method used to determine the *opt-in baseline control period* NOx *emissions*.

vi. Documentation of the *opt-in baseline* NOx *control period heat input* (in MMBTU).

A. The *opt-in baseline control period heat input* shall be the average *heat input* of two NOx *control period*s consistent with the *opt-in baseline control period* NOx mass *emissions* determined in Section 15(e)(1)(v) of this regulation.

B. The documentation shall include:

1. Quantification of the *opt-in baseline control period heat input* (in MMBTU); and

2. A description of the method used to determine the *opt-in baseline control period heat input*.

vii. Calculation of the *opt-in baseline* NOx *control period* NOx *emissions* rate, which shall be the *opt-in baseline control period* NOx mass *emissions*, as determined in Section 15(e)(1)(v) of this regulation, divided by the *opt-in baseline* NOx *control period heat input*, as determined in Section 15(e)(1)(vi) of this regulation.

viii. A statement that the *unit* was operated in accordance with all applicable requirements during the *control period*s consistent with Sections 15(e)(1)(v) and 15(e)(1)(vi) of this regulation.

2. The *NOx authorized account representative* or alternate *NOx authorized account representative* of a *unit* that is an *opt-in unit* under Section 15(a) of this regulation shall *submit* the following to the *Department* in application for initial NOx Budget *opt-in* permit under this regulation:

i. A complete *NOx Budget permit* application under Section 7(c) of this regulation;

ii. A monitoring plan *submit*ted in accordance with Section 14 of this regulation;

iii. A complete *account certificate of representation* under Section 6 of this regulation;

iv. A description of the *opt-in unit*, including fuel type(s), maximum rated *heat input* capacity and electrical rating where applicable.

v. Documentation of the *opt-in baseline control period* mass *emissions* (in tons), as determined and documented in accordance with the provisions of Regulation 37.

vi. Documentation of the *opt-in baseline* NOx

control period heat input (in MMBTU), as determined and documented in accordance with the provisions of Regulation 37.

vii. Documentation of the calculation of the *opt-in baseline* NOx *control period* NOx *emissions* rate, as determined and documented in accordance with the provisions of Regulation 37.

3. The *NOx authorized account representative* or alternate *NOx authorized account representative* of a *unit* that is an *opt-in unit* under Section 15(a) of this regulation, and is required to comply with Section 8(g) of Regulation 37 for *submit*ting a revised *opt-in* application, shall make such *submit*tal in accordance with the provisions of this regulation and Section 15(a)(1) of this regulation.

f. The *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget opt-in source* shall *submit* a complete *NOx Budget permit* application under Section 7(c) of this regulation to renew the *NOx Budget opt-in permit* in accordance with Section 7(b)(2) of this regulation and, if applicable, an updated monitoring plan in accordance with Section 14 of this regulation.

g. The *Department* will issue or deny a *NOx Budget opt-in permit* for a *unit* for which an initial application for a *NOx Budget opt-in permit* under Section 15(e) of this regulation is *submit*ted, in accordance with Section 7 of this regulation and the following:

1. The *Department* shall review the initial *opt-in* application for completeness and accuracy and:

i. For NOx budget *opt-in unit*s under Section 15(b) of this regulation, verify that the monitoring methods used to determine the *opt-in baseline control period* NOx mass *emissions* under Section 15(e)(5) of this regulation and the *opt-in baseline* NOx *control period heat input* under Section 15(e)(6) of this regulation are consistent with those described in Section 14 of this regulation. The monitoring methodologies must have been consistent with the requirements of 40 CFR Part 75, and attained at least 90% data availability during the subject *opt-in baseline control period.*

ii. For NOx budget *opt-in unit*s under Section 15(b) of this regulation, verify that the *opt-in baseline emissions* rate was calculated in accordance with the Section 15(e)(1)(vii) of this regulation.

iii. For NOx budget *opt-in unit*s under Section 15(a) of this regulation, verify that the *opt-in baseline emissions* calculation and data are consistent with the data and calculation utilized under Regulation 37. The monitoring methodologies used for data collection must have been consistent with the requirements of 40 CFR Part 75, and attained at least 90% data availability during the subject *opt-in baseline control period*.

2. If the *Department* disapproves the *opt-in* application, the *NOx authorized account representative* identified in the *opt-in* application shall be notified in writing of the determination and the reason(s) for the application not being approved.

3. If the *Department* determines that the *opt-in* application is acceptable and approves opting the *unit* into the *NOx Budget Trading Program*, the *Department* shall notify the *NOx authorized account representative* identified in the *opt-in* application in writing of the determination.

4. After determining that the *opt-in* application is acceptable and meets the requirements for opting the *unit* into the *NOx Budget Trading Program*, the *Department* will prepare a draft *opt-in* permit and will serve the draft *NOx Budget opt-in permit* on the *NOx authorized account representative* of the *unit*.

5. Within 20 days after the issuance of the draft *NOx Budget opt-in permit*, the *NOx authorized account representative* or the alternate *NOx authorized account representative* of the *unit* under Section 15(b) of this regulation must *submit* to the *Department* a confirmation of the intention to opt in the *unit* or a withdrawal of the application for a *NOx Budget opt-in permit* under Section 15(e) of this regulation. The *Department* will treat the failure to make a timely submission as a withdrawal of the *NOx Budget opt-in permit* application. Section 15(g)(5) of this regulation does not apply to *unit*s under Section 15(a) of this regulation.

6. Issuance of draft *NOx Budget opt-in permit.*

i. If the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *unit* under Section 15(b) of this regulation confirms the intention to *opt-in* the *unit* under Section 15(g)(5) of this regulation, the *Department* will issue the draft *NOx Budget opt-in permit* in accordance with Section 7 of this regulation.

ii. The *Department* shall issue a draft NOx budget *opt-in* permit to a *unit* under Section 15(a) of this regulation in accordance with Section 7 of this regulation.

7. Notwithstanding Sections 15(g)(1) through 15(g)(6) of this regulation, if at any time before issuance of a draft *NOx Budget opt-in permit* for the *unit* under Section 15(b) of this regulation, the *Department* determines that the *unit* does not qualify as a *NOx Budget opt-in source* under Section 15(b) of this regulation, the *Department* will issue a draft denial of a *NOx Budget opt-in permit* for the *unit* in accordance with Section 7 of this regulation.

8. Withdrawal of application for *NOx Budget opt-in permit.*

i. A *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *unit* under Section 15(b) of this regulation may withdraw its application for a *NOx Budget opt-in permit* under Section 15(e) of this regulation at any time prior to the issuance of the final *NOx Budget opt-in permit*. Once the application for a *NOx Budget opt-in permit* is withdrawn, a *NOx authorized*

account representative or the alternate *NOx authorized account representative* wanting to reapply must *submit* a new application for a *NOx Budget permit* under Section 15(e) of this regulation.

ii. A NOx budget *opt-in unit* under Section 15(a) of this regulation may not withdraw application for a NOx Budget *opt-in* permit except in accordance with Section 15(k) of this regulation.

9. The effective date of the initial *NOx Budget opt-in permit* shall be May 1 of the first *control period* starting after the issuance of the initial *NOx Budget opt-in permit* by the *Department*. The *unit* shall be a *NOx Budget opt-in source* and a *NOx Budget unit* as of the effective date of the initial *NOx Budget opt-in permit*.

h. *NOx Budget opt-in permit* contents.

1. Each *NOx Budget opt-in permit* (including any draft or proposed *NOx Budget opt-in permit*, if applicable) will contain all elements required for a complete *NOx Budget opt-in permit* application under Section 7(c) of this regulation as approved or adjusted by the *Department*.

2. Each *NOx Budget opt-in permit* is deemed to incorporate automatically the definitions of terms under Section 3 of this regulation and, upon *recordation* by the *Administrator* under Section 10, Section 11, Section 12, Section 13, Section 15, or Section 16 of this regulation, every *allocation*, transfer, or deduction of *NOx allowance*s to or from the *compliance account*s of each *NOx Budget opt-in source* covered by the *NOx Budget opt-in permit* or the *overdraft account* of the *NOx Budget source* where the *NOx Budget opt-in source* is located.

i. Change in regulatory status.

1. When a *NOx Budget opt-in source* becomes a *NOx Budget unit* under Section 2(a)(1) or Section 2(a)(2) of this regulation, the *NOx authorized account representative* or the alternate *NOx authorized account representative* shall notify in writing the *Department* and the *Administrator* of such change in the *NOx Budget opt-in source*'s regulatory status, within 30 days of such change.

2. When the *NOx Budget opt-in source* becomes a *NOx Budget unit* under Section 2(a)(1) or Section 2(a)(2) of this regulation, the *Department* will revise the *NOx Budget opt-in source*'s *NOx Budget opt-in permit* to meet the requirements of a *NOx Budget permit* under Section 7(d) of this regulation as of an effective date that is the date on which such *NOx Budget opt-in source* becomes a *NOx Budget unit* under Section 2 of this regulation.

3. The *Administrator* will deduct from the *compliance account* for the *NOx Budget unit* under Section 15(i)(1) of this regulation, or the *overdraft account* of the *NOx Budget source* where the *unit* is located, *NOx allowance*s equal in number to and *allocated* for the same or a prior *control period* as:

i. Any *NOx allowance*s *allocated* to the *NOx Budget unit* (as a *NOx Budget opt-in source*) under Section 15(j) of this regulation for any *control period* after the last *control period* during which the *unit*'s *NOx Budget opt-in permit* was effective; and

ii. If the effective date of the *NOx Budget permit* revision under Section 15(i)(1) of this regulation is during a *control period*, the *NOx allowance*s *allocated* to the *NOx Budget unit* (as a *NOx Budget opt-in source*) under Section 15(j) of this regulation for the *control period* multiplied by the ratio of the number of days, in the *control period*, starting with the effective date of the permit revision under Section 15(i)(1) of this regulation, divided by the total number of days in the *control period*.

4. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall ensure that the *compliance account* of the *NOx Budget unit* under Section 15(i)(1) of this regulation, or the *overdraft account* of the *NOx Budget source* where the *unit* is located, includes the *NOx allowance*s necessary for completion of the deduction under Section 15(i)(3) of this regulation. If the *compliance account* or *overdraft account* does not contain sufficient *NOx allowance*s, the *Administrator* will deduct the required number of *NOx allowance*s, regardless of the *control period* for which they were *allocated*, whenever *NOx allowance*s are *recorded* in either account.

5. For every *control period* during which the *NOx Budget permit* revised under Section 15(i)(1) of this regulation is effective, the *NOx Budget unit* under Section 15(i)(1) of this regulation will be treated, solely for purposes of *NOx allowance allocation*s under Section 9 of this regulation, as a *unit* that commenced operation on the effective date of the *NOx Budget permit* revision under Section 15(i)(1) of this regulation and will be *allocated NOx allowance*s (if any) under Section 9 of this regulation.

6. Notwithstanding Section 15(i)(5) of this regulation, if the effective date of the *NOx Budget permit* revision under Section 15(i)(2) of this regulation is during a *control period*, the following number of *NOx allowance*s will be *allocated* to the *NOx Budget unit* under Section 15(i)(2) of this regulation under Section 9 of this regulation for the *control period*: the number of *NOx allowance*s otherwise *allocated* to the *NOx Budget unit* under Section 9 of this regulation for the *control period* multiplied by the ratio of the number of days, in the *control period*, starting with the effective date of the permit revision under Section 15(i)(2) of this regulation, divided by the total number of days in the *control period*.

7. When the *NOx authorized account representative* or the alternate *NOx authorized account representative* of a *NOx Budget opt-in source* does not renew its *NOx Budget opt-in permit* under Section 15(f) of this regulation, the *Administrator* will deduct from the NOx Budget *opt-in unit*'s *compliance account*, or the *overdraft account* of the *NOx Budget source* where the *NOx Budget opt-in source* is located, *NOx allowance*s equal in number to

and *allocated* for the same or a prior *control period* as any *NOx allowance*s *allocated* to the *NOx Budget opt-in source* under Section 15(j) of this regulation for any *control period* after the last *control period* for which the *NOx Budget opt-in permit* is effective. The *NOx authorized account representative* or the alternate *NOx authorized account representative* shall ensure that the *NOx Budget opt-in source*'s *compliance account* or the *overdraft account* of the *NOx Budget source* where the *NOx Budget opt-in source* is located includes the *NOx allowance*s necessary for completion of such deduction. If the *compliance account* or *overdraft account* does not contain sufficient *NOx allowance*s, the *Administrator* will deduct the required number of *NOx allowance*s, regardless of the *control period* for which they were *allocated*, whenever *NOx allowance*s are *recorded* in either account.

8. After the deduction under Section 15(i)(7) of this regulation is completed, the *Administrator* will close the *NOx Budget opt-in source*'s *compliance account*. If any *NOx allowance*s remain in the *compliance account* after completion of such deduction and any deduction under Section 11 of this regulation, the *Administrator* will close the *NOx Budget opt-in source*'s *compliance account* and will establish, and transfer any remaining allowances to, a new *general account* for the *owner*s and *operator*s of the *NOx Budget opt-in source*. The *NOx authorized account representative* for the *NOx Budget opt-in source* shall become the *NOx authorized account representative* for the *general account*.

j. *NOx Allowance Allocation*s to Opt-In *Unit*s

1. *NOx allowance allocation.*

i. By December 31 immediately before the first *control period* for which the *NOx Budget opt-in permit* is effective, the *Department* will *allocate NOx allowance*s to the *NOx Budget opt-in source* and *submit* to the *Administrator* the *allocation* for the first three *control period*s in accordance with Section 15(j)(2) of this regulation.

ii. By April 1 of each year after the first *control period* for which the *NOx Budget opt-in permit* is in effect, the *Department* will *allocate NOx allowance*s to the *NOx Budget opt-in source*, in accordance with Section 15(j)(2) of this regulation, and *submit* to the *Administrator NOx allowance allocation*s for the *control period* in the year that is three years after the year of the applicable deadline for submission under this Section 15(j)(1)(ii). If the *Department* fails to *submit* to the *Administrator* the *NOx allowance allocation*s in accordance with this Section 15(j)(1)(ii), the *Administrator* will allocate, for the applicable *control period*, the same number of *NOx allowance*s as were *allocated* for the preceding *control period.*

2. For each *control period* for which the *NOx Budget opt-in source* has an approved *NOx Budget opt-in permit*, the *NOx Budget opt-in source* will be *allocated NOx allowance*s in accordance with the following procedures:

i. The *NOx allowance allocation* for a NOx budget *opt-in source* under Section 15(b) of this regulation shall be equal to the lesser of the *opt-in baseline control period emissions* under Section 15(e)(5) of this regulation or the allowable NOx *emissions* from the *unit*.

ii. The *NOx allowance allocation* for a NOx budget *opt-in source* under Section 15(b) of this regulation that has a *maximum design heat input* of 250 MMBTU/hr, or greater, shall be determined as follows:

A. The greater of:

1. The *opt-in baseline control period* actual NOx mass *emissions*, under Section 15(e)(5) of this regulation, reduced by 75%;or

2. The mass *emissions* resulting from the multiplication of the actual *opt-in baseline* NOx *control period heat input*, under Section 15(e)(6) of this regulation, by a NOx *emissions* rate of 0.15 lb/MMBTU.

B. If any NOx *emissions* limit identified in the *unit*'s current construction or operating permit results in *NOx allowance allocations* that are lower than both of the amounts calculated under Section 15(j)(2)(ii)(A) of this regulation, then the *emissions* limit identified in the construction or operating permit shall be used to determine the *NOx allowance allocation* for the *NOx Budget Trading Program*.

iii. The *NOx allowance allocation* for a NOx budget *opt-in source* under Section 15(a) of this regulation shall remain unchanged from the allowance *allocation* under the *opt-in* provisions of Regulation 37.

3. If an *opt-in unit* is required to obtain NOx *emissions* offsets in accordance with the provisions of Regulation 25 of the State of Delaware "Regulations Governing the Control of Air Pollution", the *NOx allowance allocation* calculated under Section 15(j)(2) of this regulation shall be reduced by the portion of the NOx *control period emissions* reduction that is obtained as offsets from any *NOx Budget Trading Program unit.*

k. Any *unit* for which a final NOx budget *opt-in* permit has been issued, either under the provisions of Regulation 37, NOx Budget Program, of Delaware's "Regulations Governing the Control of Air Pollution", or under the provisions of Section 15 of this regulation, can not opt-out of the program unless NOx emitting operations at the *opt-in source* have ceased, and the allowance adjustment provisions of Section 15(l) of this regulation apply.

l. Any NOx budget *opt-in unit* who subsequently chooses to cease or curtail operations during any NOx *control period* after issuance of a final NOx budget *opt-in* permit shall be subject to an allowance adjustment equivalent to the NOx *emissions* decrease that results from the shut down or curtailment.

1. The *Administrator* shall compare actual *heat input* data following each NOx *control period* with the *opt-in*

baseline NOx *control period heat input*.

2. The *Administrator* shall calculate and *deduct NOx allowances* equivalent to any decrease in the *opt-in unit*'s NOx *control period heat input* below its *opt-in baseline* NOx *control period heat input*.

3. The *Administrator* shall notify the NOx op-in *unit*'s *NOx authorized account representative* and the *Department* of any such deductions.

4. This adjustment affects only the *current year NOx allowance allocation* and shall not effect the *opt-in unit*'s *NOx allowance allocation* for future years.

5. No deduction shall result from reducing the NOx emission rate below the rate used in determination of the *opt-in unit*'s *NOx allowance allocation* under Section 15(j)(2) of this regulation.

6. A *unit* that is to be repowered or replaced can be opted into the *NOx Budget Trading Program* without the shutdown/curtailment deductions. The *heat input* for the repowered or replaced *source* can be substituted for the present year's activity for the *opt-in NOx allowance* adjustment calculation.

m. For *units* replacing the production of *NOx budget trading program opt-in unit*s, all *unit*s under the control of a common *owner* or *operator* in the State of Delaware to which production may be shifted shall be opted into the *NOx budget trading program* together.

n. Under no circumstances shall the *allocation* of *NOx allowance*s to a *unit* which chooses to opt into the *NOx Budget Trading Program* require adjustments to the *allocation* of *NOx allowance*s to budget *source*s in the *NOx Budget Trading Program*.

Section 16 - Failure to Meet Compliance Requirements

a. Deductions for *excess emissions*

1. After making the deductions for compliance under Section 11 of this regulation, the *Administrator* will deduct from the *unit*'s *compliance account* or the *overdraft account* of the *source* where the *unit* is located a number of *NOx allowance*s, *allocated* for a *control period* after the *control period* in which the *unit* has *excess emissions*, equal to three times the number of the *unit*'s *excess emissions*.

2. If the *compliance account* or *overdraft account* does not contain sufficient *NOx allowance*s, the *Administrator* will deduct the required number of *NOx allowance*s, regardless of the *control period* for which they were *allocated*, whenever *NOx allowance*s are *recorded* in either account.

3. For any *NOx Budget unit* under Regulation 37 of the State of Delaware's "Regulations Governing the Control of Air Pollution" that has *excess emissions* for the year 2002 *control period*, the *Administrator* will deduct from the *unit*'s *compliance account* or the *overdraft account* of the *source* where the *unit* is located a number of *NOx allowance*s, *allocated* for the 2003 or subsequent *control period*s, equal to three times the number of the *unit*'s *excess emissions* in the 2002 *control period*.

b. Any *NOx allowance deduction* required under Section 16(a) of this regulation shall not affect the liability of the *owner*s and *operator*s of the *NOx Budget unit* for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under the *CAA* or applicable *State* law. The following guidelines will be followed in assessing fines, penalties or other obligations:

1. For purposes of determining the number of days of violation, if a *NOx Budget unit* has *excess emissions* for a *control period*, each day in the *control period* (153 days) constitutes a day in violation unless the *owner*s and *operator*s of the *unit* demonstrate that a lesser number of days should be considered.

2. Each *ton* of *excess emissions* is a separate violation.

DIVISION OF WATER RESOURCES

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

Total Maximum Daily Load (TMDL) for Zinc in the Red Clay Creek, Delaware

REGISTER NOTICE

Brief Synopsis of the Subject, Substance, and Issues

The Department of Natural Resources and Environmental Control (DNREC) is proposing to adopt a Total Maximum Daily Load (TMDL) Regulation for zinc in the Red Clay Creek. A TMDL sets a limit on the amount of a substance that can enter a water body while still assuring that applicable water quality standards are met and beneficial stream uses are protected. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties.

Possible Terms of the Agency Action

Following adoption of the proposed Total Maximum Daily Load for zinc in the Red Clay Creek, DNREC will develop a Pollution Control Strategy (PCS) to achieve the necessary load reductions. The PCS will identify specific pollution reduction activities and timeframes and will be developed in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program.

Statutory Basis or Legal Authority to Act

The authority to develop a TMDL is provided by Title 7 of the Delaware Code, Chapter 60, and Section 303(d) of the Federal Clean Water Act, 33 U.S.C. 1251 et. seq., as amended.

Other Legislation That May Be Impacted

None

Notice of Public Comment

A public **workshop** will be held on Tuesday, September 7, 1999, between 3:00 and 4:00 p.m., at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware.

A public **hearing** will be held on Tuesday, September 7, 1999, between 7:00 and 8:00 p.m., also at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware. The hearing record will remain open until 4:30 p.m., September 15, 1999. Please bring written comments to the hearing or send them to Rod Thompson, Hearing Officer, DNREC, 89 Kings Highway, Dover, DE, 19901; facsimile: (302) 739- 6242. All written comments must be received by 4:30 p.m., September 15, 1999. For planning purposes, those individuals wishing to make oral comments at the public hearing are requested to notify Betty Turner, (302-739-4590; facsimile: (302) 739-6140; email: bturner@state.de.us) by 12:00 p.m., September 7, 1999.

Additional information and supporting technical documents may be obtained from the Watershed Assessment Section, Division of Water Resources, Department of Natural Resources and Environmental Control, Silver Lake Plaza – Suite 220, 820 Silver Lake Blvd, Dover, DE 19904-2464, (302) 739-4590, facsimile: (302) 739-6140.

Prepared By:

Richard Greene, Watershed Assessment Section, (302) 739-4590.

Total Maximum Daily Load (TMDL) for Zinc in the Red Clay Creek, Delaware

A. INTRODUCTION and BACKGROUND

Water quality monitoring performed by the Delaware Department of Natural Resources and Environmental Control (DNREC) and others has shown that the Red Clay Creek, adjacent to and downstream of Yorklyn, Delaware, does not meet applicable water quality standards for zinc. Although zinc is an essential element for both aquatic life and humans, excessive concentrations can adversely affect aquatic life and human health. Zinc concentrations in the Red Clay Creek are not high enough to adversely affect people who drink water that is withdrawn from the Red Clay Creek. Zinc concentrations do, however, frequently exceed water quality criteria designed to protect fish and other aquatic life from the toxic affects of the metal.

A reduction in the amount of zinc reaching the Red Clay Creek is necessary to assure that applicable water quality standards are met and beneficial stream uses are protected. Zinc enters the Red Clay Creek from point sources and nonpoint sources. The National Vulcanized Fiber (NVF) Company located in Yorklyn, Delaware, is the only permitted point source discharge of zinc to the Red Clay Creek in Delaware. Nonpoint sources of zinc in the Red Clay Creek include background loading from the area of the

Red Clay Creek watershed upstream of Yorklyn, seepage of contaminated groundwater from beneath the NVF facility to the Red Clay Creek, and diffusive flux from Creek sediments to the overlying water column.

Section 303(d) of the Federal Clean Water Act (CWA) requires States to develop a list (303(d) List) of waterbodies for which existing pollution controls are not sufficient to attain applicable water quality standards. Section 303(d) also requires each state to develop Total Maximum Daily Loads (TMDLs) for those waterbodies and pollutants placed on the state's 303(d) List. A TMDL sets a limit on the amount of a substance that can enter a water body while still assuring that applicable water quality standards are met and beneficial stream uses are protected. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties.

DNREC listed the Red Clay Creek on Delaware's 1996 and 1998 303(d) Lists because applicable water quality standards for zinc were, and continue to be, frequently exceeded. Therefore, DNREC is proposing the following Total Maximum Daily Load (TMDL) regulation for zinc in the Red Clay Creek.

B. Total Maximum Daily Load (TMDL) Regulation for Zinc in the Red Clay Creek, Delaware

Article 1. The TMDL for zinc in the Red Clay Creek shall be 1.81 pounds per day, measured as total zinc.

Article 2. The combined mass loading of zinc to the Red Clay Creek from NVF's permitted discharge 002 (i.e., WLA_{002}), plus the mass loading of zinc to the Red Clay Creek from contaminated groundwater beneath the NVF property (i.e., $LA_{g..w.}$) shall not exceed 1.2 pounds of zinc per day, measured as total zinc.

Article 3. The load allocation of zinc from the area upstream of Yorklyn (i.e., LA_{up}) shall be capped at 0.6 pounds per day, measured as total zinc.

Article 4. The margin of safety (MOS) for the TMDL listed in Article 1 has been set at 0.01 pounds of zinc per day. This small margin of safety (less than 1% of the TMDL) reflects the robust data set and the conservative approach used to establish the TMDL, while still accounting for the uncertainty associated with possible diffusion of zinc from Red Clay Creek sediments.

Article 5. DNREC has determined with a reasonable degree of scientific certainty that water quality standards for zinc will be met in the Red Clay Creek once the mass loading requirements of Articles 1 through 3 are met.

Article 6. Implementation of this TMDL Regulation shall be achieved through the development of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program. The manner in which the 1.2 pounds per day that is noted in Article 2 above is allocated between discharge 002 and the contaminated groundwater discharge shall be one particular area of focus as part of the Pollution Control Strategy. The Pollution Control Strategy will also consider how monitoring will be conducted to verify compliance with the TMDL.

DIVISION OF WATER RESOURCES

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

Total Maximum Daily Load (TMDL) for Zinc in the White Clay Creek, Delaware

REGISTER NOTICE

Brief Synopsis of the Subject, Substance, and Issues

The Department of Natural Resources and Environmental Control (DNREC) is proposing to adopt a Total Maximum Daily Load (TMDL) Regulation for zinc in the White Clay Creek. A TMDL sets a limit on the amount of a substance that can enter a water body while still assuring that applicable water quality standards are met and beneficial stream uses are protected. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties.

Possible Terms of the Agency Action

Following adoption of the proposed Total Maximum Daily Load for zinc in the White Clay Creek, DNREC will develop a Pollution Control Strategy (PCS) to achieve the necessary load reductions. The PCS will identify specific pollution reduction activities and timeframes and will be developed in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program.

Statutory Basis or Legal Authority to Act

The authority to develop a TMDL is provided by Title 7 of the Delaware Code, Chapter 60, and Section 303(d) of the

Federal Clean Water Act, 33 U.S.C. 1251 et. seq., as amended.

Other Legislation That May Be Impacted

None

Notice of Public Comment

A public **workshop** will be held on Tuesday, September 7, 1999, between 4:00 and 5:00 p.m., at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware.

A public **hearing** will be held on Tuesday, September 7, 1999, between 8:00 and 9:00 p.m., also at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware. The hearing record will remain open until 4:30 p.m., September 15, 1999. Please bring written comments to the hearing or send them to Rod Thompson, Hearing Officer, DNREC, 89 Kings Highway, Dover, DE, 19901; facsimile: (302) 739- 6242. All written comments must be received by 4:30 p.m., September 15, 1999. For planning purposes, those individuals wishing to make oral comments at the public hearing are requested to notify Betty Turner, (302-739-4590; facsimile: (302) 739-6140; email: bturner@state.de.us) by 12:00 p.m., September 7, 1999.

Additional information and supporting technical documents may be obtained from the Watershed Assessment Section, Division of Water Resources, Department of Natural Resources and Environmental Control, Silver Lake Plaza – Suite 220, 820 Silver Lake Blvd, Dover, DE 19904-2464, (302) 739-4590, facsimile: (302) 739-6140.

Prepared By:

Richard Greene, Watershed Assessment Section, (302) 739-4590.

Total Maximum Daily Load (TMDL) for Zinc in the White Clay Creek, Delaware

A. INTRODUCTION and BACKGROUND

Water quality monitoring performed by the Delaware Department of Natural Resources and Environmental Control (DNREC) and others has shown that the concentration of zinc in the White Clay Creek, downstream of Paper Mill Road in Newark, Delaware, occasionally exceeds applicable water quality standards for zinc. Although zinc is an essential element for both aquatic life and humans, excessive concentrations can adversely affect aquatic life and human health. Zinc concentrations in the White Clay Creek are not high enough to adversely affect people who drink water that is withdrawn from the White Clay Creek. Zinc concentrations do, however, occasionally exceed water quality criteria designed to protect fish and other aquatic life from the toxic affects of the metal.

A reduction in the amount of zinc reaching the White Clay Creek is necessary to assure that applicable water quality standards are met and beneficial stream uses are protected. Zinc enters the White Clay Creek primarily from nonpoint sources. Nonpoint sources of zinc in the White Clay Creek include background loading from the area of the White Clay Creek watershed upstream of Paper Mill Road, stormwater runoff of contaminated soils from the old National Vulcanized Fiber (NVF) Company facility in Newark, Delaware, and flux from Creek sediments to the overlying water column.

Section 303(d) of the Federal Clean Water Act (CWA) requires States to develop a list (303(d) List) of waterbodies for which existing pollution controls are not sufficient to attain applicable water quality standards. Section 303(d) also requires each state to develop Total Maximum Daily Loads (TMDLs) for those waterbodies and pollutants placed on the state's 303(d) List. A TMDL sets a limit on the amount of a substance that can enter a water body while still assuring that applicable water quality standards are met and beneficial stream uses are protected. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties.

DNREC listed the White Clay Creek on Delaware's 1996 and 1998 303(d) Lists because applicable water quality standards for zinc were, and continue to be, occassionally exceeded. Therefore, DNREC is proposing the following Total Maximum Daily Load (TMDL) regulation for zinc in the White Clay Creek.

B. Total Maximum Daily Load (TMDL) Regulation for Zinc in the White Clay Creek, Delaware

Article 1. The TMDL for zinc in the White Clay Creek shall be 6.73 pounds per day, measured as total zinc.

Article 2. The mass loading of zinc to the White Clay Creek from the NVF, Newark facility property (i.e., LA_{NVF}) shall not exceed 3.5 pounds of zinc per day, measured as total zinc.

Article 3. The load allocation of zinc from the area upstream of Paper Mill Road (i.e., LA_{up}) shall be capped at 3.07 pounds per day, measured as total zinc.

Article 4. The margin of safety (MOS) for the TMDL listed in Article 1 has been set at 0.16 pounds of zinc per day. This margin of safety (approximately 2% of the TMDL) reflects the modest data set and the highly conservative approach used to establish the TMDL, while at the same time accounting for uncertainties associated with sediment processes in the Creek.

Article 5. DNREC has determined with a reasonable degree of scientific certainty that water quality standards for zinc will be met in the White Clay Creek once the mass loading requirements of Articles 1 through 3 are met.

Article 6. Implementation of this TMDL Regulation shall be achieved through the development of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program. The manner in which the 3.5 pounds per day that is noted in Article 2 above is achieved shall be one particular area of focus as part of the Pollution Control Strategy. The Pollution Control Strategy will also consider how monitoring will be conducted to verify compliance with the TMDL.

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.

DEPARTMENT OF ADMINISTRATIVE SERVICES

MERIT EMPLOYEE RELATIONS BOARD

Statutory Authority: 29 Delaware Code, Section 5914 (29 **Del.C.** 5914)

IN THE MATTER OF THE REPEAL OF EXISTING MERIT RULE CHAPTER 20 AND THE ADOPTION OF A REVISED CHAPTER 20	ORDER

BEFORE ROBERT BURNS, VICE-CHAIRPERSON; DALLAS GREEN, JOHN F. SCHMUTZ, ESQUIRE, AND JOHN W. PITTS, MEMBERS, CONSTITUTING A QUORUM OF THE MERIT EMPLOYEE RELATIONS BOARD PURSUANT TO 29 DEL. C. §5908(A).

BACKGROUND

On March 16, 1999, the Director of the office of State Personnel transmitted to the Merit Employee Relations Board ("MERB" or "Board") a proposed new Chapter 20 for Merit Rules of the State of Delaware. The proposed new Merit Rules were accompanied by a request for the repeal of the existing Merit Rule Chapter 20, and the assertion by the Director that the proposed new Merit Rules and the repeal of the old Chapter 20 had been approved by the Statewide Labor-Management Committee. (Board Hearing Exhibit No. 1)

The Board, in accordance with 29 Del. C. §5915 and 29 Del. C. ch 101, caused notice of the proposed new Merit Rule Chapter 20, repeal of the existing Merit Rule Chapter 20, and the public hearing to be conducted thereon, to be published in the Delaware Register of Regulations, Volume 2 - Issue 11, dated May 1, 1999. (Board Hearing Exhibit No. 2) The Board also gave notice of the time and place for the public hearing on such proposed changes in two newspapers of general circulation. (Board Hearing Exhibit No. 3)

PUBLIC HEARING

Pursuant to due notice, a public hearing was held on June 8, 1999 concerning the Director's proposed repeal of the existing Chapter 20 and its replacement with a new Chapter 20 consisting of Merit Rules No. 20.1 through 20.11. The Board, in its public notices of the hearing, requested written comments concerning the proposed changes to Merit Rule Chapter 20. Only one written comment was filed. (Board Hearing Exhibit No. 4) This written comment was addressed to proposed new Merit Rule 20.11 and noted that under the proposed Rule employees are not allowed to use State time to accomplish any grievance investigation or preparation and are not allowed time off with pay to speak with their grievance representative. The suggestion was made that time be allowed for these activities or, if the grievance is upheld, that the employee be

compensated for personal time used for these activities.

No other written comments were received and no member of the public and no state employee appeared to testify at the public hearing except as noted below.

The State Personnel Office was represented at the hearing by the Director Harriet N. Smith Windsor, Ed.D., Thomas LoFaro, Deputy Director for Employee Relations, Katie A. Horvath, Employee Relations Program Manager, and Deputy Attorney General Ilona Kirshon. Dr. Smith Windsor described for the Board the history of the proposed revisions to Chapter 20 of the Merit Rules and the positive reception such changes had received form Statewide Labor-Management Committee which is co-chaired by Dr. Smith Windsor and Michael A. Begatto, the Executive Director of the American Federation of State, County, and Municipal Employees Union ("AFSCME").

Thomas LoFaro, Deputy Director for Employee Relations in the State Personnel Office, described and discussed for the Board each of the new Merit Rules in the proposed Chapter 20.

In responding to the written comment received by the Board, Mr. LoFaro observed that the requirement that employees not work on grievances during the normal work day was not a change and had the full support of the Statewide Labor-Management Committee. According to Mr. LoFaro, the present Merit Rule No. 6.0450 contains the same prohibition in that it does not allow time off during working hours with pay for the preparation of a grievance or consultation with an employee's representative.

Mr. LoFaro stated that the proposed Merit Rules No. 20.1, 20.2 and 20.3 were the same as existing Merit Rules with simplified wording. As to proposed Rule No. 20.1, informal sessions with employees and their immediate supervisors are not a new requirement and can be found in existing Merit Rule No. 20.0100.

Mr. LoFaro noted that the proposed Merit Rule No. 20.4 is a change from the existing Merit Rule in that it reflects a legislative enactment requiring that movement between the steps at the employing agency is automatic when the agency fails to meet the time requirements for processing a grievance. The failure of the grievant to meet the time requirements continues, in the proposed Merit Rule 20.4, to void the grievance. Proposed Merit Rule No. 20.4 also eliminated the concept of "working days" in calculating the time period for filing or processing a grievance in favor of the concept of "calendar days" and the period is extended to 14 calendar days as opposed to 10 working days in the old Chapter 20.

Mr. LoFaro related that proposed Merit Rule No. 20.5 is another attempt at simplification and consolidation in that it brings the existing limitations on filing a grievance regarding promotions from Chapter 13 into Chapter 20 without any substantiative change in language.

Proposed Merit Rule No. 20.6 corresponds to the existing Merit Rule No. 20.310 providing for step 1 in the grievance process. The proposed Rule 20.6 also uses the concept of calendar days rather than working days and provides for the events which management must accomplish within 14 calendar days of the filing of a grievance.

Proposed Merit Rule No. 20.7 corresponds, according to Mr. LoFaro, to the existing Merit Rule No. 20.0220 or step 3 in the grievance process. The proposed Chapter 20 eliminates what was step 2 in the grievance process under the old Rules. This elimination of former step 2 is one of the hallmarks of the proposed new Chapter 20 streamlining and removes a step which, according to Mr. LoFaro, many contended was unnecessary and indeed, redundant. Under the proposed Merit Rule No. 20.7, the appeal is to be filed in writing with the top agency personnel official or representative within 7 calendar days of the step 1 reply (or the lack of a timely reply after 14 days).

Mr. LoFaro noted that proposed Merit Rule No. 20.8 establishes as step 3 in the grievance process the proceeding which was formerly step 4 or the appeal beyond the department or agency to the Director of the Office of State Personnel. The revisions in proposed Merit Rule No. 20.8 incorporate 3 notable changes according to Mr. LoFaro. First, the Director of the office of State personnel or her designee can now resort to informal resolution of the grievance where deemed appropriate and is not required to always conduct a hearing. The second important modification is the inclusion of a requirement which reflects the present Administration's determination that as far as state agencies were concerned, there should be finality at the level of the decision of the State Personnel Office. This is provided in the last sentence of proposed merit Rule No. 20.8 which states: "The Step 3 decision is final and binding upon agency management." According to Mr. LoFaro, this means that there will be no appeals by state agencies from Step 3 decisions to the Merit Employee Relations Board. Only employees who are not satisfied with the Step 3 (State Personnel Office) resolution will be able to appeal to MERB. The third change is the elimination of the present limitation on grievances of performance appraisals. Mr. LoFaro stated that the proposed new Merit Rule 20.8 establishing Step 3, did not contain the limitation on consideration of performance appraisals found in present Merit Rule No. 20.0340 and he stated that it was the intent to thereby also modify Merit Rule No. 21.0120 which establishes a further limitation on review of performance appraisals by MERB. However, Mr. LoFaro acknowledged that the Director had not sought the repeal of any portions of Chapter 21 of the existing Merit Rules and that the Board had not given public notice that it would consider any such repeal.

Mr. LoFaro also stated that it was the intent of the Director and of the Statewide Labor-Management Committee to require that all grievances processed through

the Merit Rules should come to the Office of State Personnel for a Step 3 determination before being appealed to MERB. Mr. LoFaro acknowledged that existing Merit Rule No. 21.0110 provides for certain direct appeals to MERB without going through a Step 3 process. He noted that, while it was intended to eliminate direct appeals to assure an opportunity for a review by the Office of State Personnel, the Director had not sought repeal of Merit Rule No. 21.0110 and no public notice was given of consideration of the elimination of direct appeals to MERB for disciplinary dismissals, demotions, or suspensions.[1]

Mr. LoFaro stated that proposed Merit Rule No. 20.9 is intended to address appeals to the MERB and provides that they are to be "presented" in writing to the Board within 20 calendar days of the "receipt" of the Step 3 decision or within 20 calendar days of the informal meeting at Step 3 whichever is later.[2]

Proposed Merit Rule No. 20.10, according to Mr. LoFaro, continues the existing limitation on retroactive remedies contained in present Merit Rule No. 20.0371 providing that they apply only to the grievant and, for a continuing claim, are limited to 30 calendar days prior to the grievance filing date. Also, as presently provided in existing Merit Rule No. 20.0371, any financial settlement is to be reduced by the amount of the grievant's earnings during the period covered by the settlement regardless of source, excluding part-time income which was being received prior to separation.

Proposed Merit Rule No. 20.11, as previously noted by Mr. LoFaro, is not a change and continues the existing constraint on employees using state time for grievance preparation.

DISCUSSION, FINDINGS AND CONCLUSION

Under the provisions of 29 Del. C. §5914, Merit Rule changes which are proposed by the Director are to become final upon completion of the public hearing unless rejected by a majority of the members appointed to the Board. The Board finds that the Director's proposed changes which have been approved by the Statewide Labor-Management Committee are intended to simplify the grievance process by reducing the number of steps and making the other clarifications discussed above. The goal of simplification is worthwhile and the addition of agency finality at Step 3 should help to bring consistency to grievance decisions over time. The Board finds that it has been presented with no basis to reject the proposed modifications consisting of the repeal of existing Chapter 20 of the Merit Rules and its replacement with the proposed revised Chapter 20 consisting of Merit Rules 20.1 through 20.11 the exact text of which is attached to this Order. Under the circumstances, by unanimous vote of the members of the Board hearing this matter, the proposed changes are approved. The only written comment received concerned the entitlement of employees to process grievances during working hours and was adequately addressed in the presentation of Mr. LoFaro. It does not represent a significant change from the existing Merit Rule requirements.

According to Mr. LoFaro, it was the intent of the Statewide Labor-Management Committee to liberalize the existing limitations on the review of performance evaluations. The existing Merit Rules limit the consideration of performance evaluations in two locations. First, there is a limitation contained in Merit Rule No. 20.0340 (Step 4 of the grievance process) which provides that the State Personnel Office will not review employee performance appraisals because the decision of the agency head is final unless Merit Rule No. 21.0121 authorizes a further written review by the Personnel Commission. [MERB][3]

This limitation in the present Chapter 20 will no longer be present with the repeal of existing Chapter 20. However, the Director did not seek and the Board did not give public notice of consideration of repeal of any portion of the existing Merit Rules other than existing Chapter 20 and thus cannot approve the repeal of Merit Rule No. 21.0121. The effect of this situation appears to be that after the effective date of these Merit Rule changes, an employee will be able to have his or her performance appraisal grievance

1. The Board notes that direct appeals to the MERB are provided for by statute in 29 *Del. C.* §5949(a) in certain limited instances: specifically, for dismissals, demotions or suspensions for more than 30 days. Existing Merit Rule No. 21.0110 is more liberal and provides for direct appeal to the MERB in cases of dismissal, demotion or suspensions of any period. The Board has previously liberally construed this Merit Rule and has heard grievance appeals of, for example, a one day suspension.

2. The Board notes that the terms "present", "receipt", and "issue" or "reply" are presently defined in Merit Rule No. 20.0300. This Rule is among those Rules in the existing Chapter 20 which the Director and the Statewide Labor-Management Committee have sought to have repealed. These terms are not expressly defined in the proposed new Chapter 20 Rules. It might be helpful to employees and managers alike to have a common understanding of these and similar terms. During the hearing, the Director noted the willingness of the State Personnel Office to design a form for use in filing grievances. It is suggested that any instructions for the use of such form should clearly set forth the expectations and requirements for the timely filing of a grievance.

considered by the Office of State Personnel as a part of Step 3 grievance but will only be able to appeal such grievance to the MERB if it meets the requirements of Merit Rule No. 21.0121.

Similarly, the Board cannot approve the elimination of direct appeals to the MERB which are provided for in Merit Rule 21.0111 because there has been no public notice of any consideration of such repeal. Mr. LoFaro's statement that such a result was intended by the Statewide Labor-Management Committee may make some sense from the standpoint of affording the Office of State Personnel the opportunity at Step 3 of the new grievance process (proposed Merit Rule No. 20.8). However, the Board may not repeal Merit Rule No. 21.0111 in the absence of due public notice. Therefore, as noted above, the Board will continue to accept direct appeal from certain disciplinary matters as provided in Merit Rule No. 21.0111.

The effective date of the repeal of the old Chapter 20 and the effective date of the proposed new Chapter 20 shall, in accordance with the request of the Director of the Office of State Personnel and in conformity with the provisions of 29 Del. C. §10118(e), be 10 days after the publication of this Order and new Merit Rules 20.1 through 20.11 in the Delaware Register of Regulations which should occur on August 1, 1999. All grievances filed after that date will be governed by the grievance procedure set forth in Merit Rule No. 20.1 through 20.11.

ORDER

For the foregoing reasons by the unanimous vote of the members of the Board noted above, Chapter 20 of the Delaware Merit Rules is repealed and replaced with the attached Merit Rules No. 20.1 through 20.11. The new Chapter 20 shall apply to grievances filed after the effective date as noted above.

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3. The Board notes that throughout the present version of the Merit Rules the term "Personnel Commission" continues to appear even after legislation in 1995 replaced that Commission with the Merit Employee Relations Board. The Delaware Administrative Procedures Act in Section 10113 of Title 20 of the Delaware Code provides for the informal adoption of, among other things, "Amendments to existing regulations to make them consistent with changes in basic law but which do not otherwise alter the substance of the regulation" 29 *Del. C.* §10113(a)(5). Therefore, any future publications of the Merit Rules to incorporate changes to Chapter 20 should include appropriate ministerial corrections which may be informally accomplished.

BY ORDER OF THE BOARD

Robert Burns, Vice-Chairperson
Dallas Green, Member
John F. Schmutz, Esquire, Member
John W. Pitts, Member

***Please note that no changes were made to the regulation as originally proposed and published in the May 1999 issue of the Register at page 1934 (2:11 Del.R. 1934). Therefore, the final regulation is not being republished. Please refer to the May 1999 issue of the Register or contact the Merit Employee Relations Board.**

DEPARTMENT OF AGRICULTURE

Statutory Authority: 3 Delaware Code, Sections 904(a)(1-3), 904(b)(7) & 904(b)(21) (3 **Del.C.** 904(a)(1-3), 904(b)(7) & 904(b)(21))

ORDER

Adopting Amendments to the Policies, Procedures, and By-Laws ("The Regulations") of the Delaware Agricultural Lands Preservation Foundation.

The Delaware Agricultural Lands Preservation Foundation Policies, Procedures, and By-laws were adopted on January 1995. Proposed changes to that document were submitted to the Register of Regulations and made available for public comment from that date until June 30, 1999.

Public Meetings/Hearings:

April 1, 1999 Kent County Regional Planning Commission Meeting: Room 202, Robert O'Brien Administration Building, 414 Federal Street, Dover, DE 19901. Public Meeting - 6:30 p.m.

April 6, 1999 New Castle County Planning Board: New Castle County Council Chambers, Louis L. Redding City/ County Bldg., 800 French St., Wilmington, DE 19801. Public Meeting - 7:00 p.m.

April 14, 1999Delaware Agricultural Lands Preservation Foundation: Delaware Department of Agriculture Conference Center, 2320 S. DuPont Highway, Dover, DE 19901. Public Meeting -7:00 p.m.

April 15, 1999Sussex County Planning and Zoning Commission: Sussex County Council Chambers, County Administration Bldg., The Circle, Georgetown, DE 19947. Public Meeting -7:30 p.m.

April 19, 1999Delaware Agricultural Lands Preservation Foundation: Middletown High School, Chorus

Room, 120 Silver Lake Road, Middletown, DE 19709. Public Meeting - 7:00 p.m.

April 21, 1999Delaware Agricultural Lands Preservation Foundation: Delaware Department of Agriculture Conference Center, 2320 S. DuPont Highway, Dover, DE 19901. Public Hearing -9:30 a.m. The hearing closed at 10:50 a.m.

POLICIES, PROCEDURES, AND BY-LAWS ADOPTED JANUARY 1995: EXHIBIT A

AMENDMENTS TO POLICIES, PROCEDURES, AND BY-LAWS - PROPOSED FEBRUARY 1999: EXHIBIT B

SUMMARY

The major changes to the Regulations of the Delaware Agricultural Lands Preservation Foundation are the Foundation's response to the requirements of the Fiscal Year 1999 Bond Bill which set new priorities for the Foundation to focus its efforts on areas near and adjacent to growth areas. While there are numerous "housekeeping" changes to the regulations brought about by statutory changes and experience, the sections relating to the new priorities from the Bond Bill encompass three major features:

(1) Ten points were added to the Foundation Priority Ranking System for an applicant's parcels which are within three (3) miles of a designated Growth Area. The Foundation would use the map approved by the Governor's Cabinet Committee for Statewide Planning Issues and proposed by the Foundation to rate this factor.

(2) A minimum of 75% of available funds will be directed for farms which are within three (3) miles of a designated Growth Area.

(3) A rebate of 20% of appraised value of the Development Rights for farms which are within three (3) miles of a designated Growth Area when selected for purchase by the Foundation. This provision echoed the Bond Bill waiver allowed on the matching requirements of the appropriation. This rebate was intended to encourage landowners close to growth areas (where opportunity costs for preservation are high) to make a competitive offer to sell their development rights to the Foundation. The proposed changes would not apply to lands where the Foundation had already purchased preservation easements, only those that are eligible for future consideration.

SUMMARY OF VERBAL AND WRITTEN TESTIMONY FROM PUBLIC HEARING

There were several comments in favor and opposed to the changes as presented. Most of the comments and concerns centered around the three Purchase of Development Rights (PDR) prioritization changes noted above.

People who stood to be both positively and negatively impacted by the proposed changes were not comfortable with the idea of shifting program policy while so many participants had joined with an understanding of current rules and procedures. Some felt that the proposed changes were unfair and discriminatory. A recurring theme was that landowners should be afforded the opportunity to withdraw from the program (which has a ten-year minimum participation agreement) if they were negatively affected by the changes.

Because of current zoning laws, many felt that the long-term protection of properties closer to growth zones would encourage development to "leapfrog" beyond the State's investments into the more rural areas. The policies will make land protection more expensive for the Foundation and will not protect as much land as had been done under the original Regulations. The combination of the new provisions would make landowners outside of the target zone less likely to enter the program.

In each county there were concerns that changes ran somewhat counter to current planning goals within the respective counties:

In New Castle County, the State would be placing a high(er) priority for preservation in an area the County plans to serve with sewer. In Kent County, too many areas conflicted with those planned for County growth. The proposed shift in priorities, if played out, would take away the County's ability to determine where growth and preservation should occur. In Sussex County it was felt that the changes did not reflect the goals of the County Comprehensive Plan. There were also concerns over not allowing enough room for municipalities to grow.

AMENDMENTS TO POLICIES, PROCEDURES, AND BY-LAWS AFTER HEARINGS JUNE 1999: EXHIBIT C

Many of the comments and concerns were taken into account by the Foundation and the staff, which resulted in the following conclusions and recommendations regarding the amendments:

The financial gain recognized by a 20% rebate of the appraised value on the PDR purchase price was a clear advantage for owners in the target zone over others in the program. By removing the 20% rebate from the proposed rules, the bidding becomes more equitable amongst program participants. The 20% rebate, if implemented, could have resulted in protection of no prime farm lands (due to very competitive offers) outside the target preservation zone and imposed unfairness on landowners located in the target zones who had previously sold their development rights to

the Foundation. Accordingly, it is recommended that the proposed 20% rebate be deleted.

Remove the ten (10) point bonus from the ranking so all farms can be ranked on a "level playing field" with the same 100-point criteria. The Foundation included a provision which allows for the appraisal of all properties eligible for PDR's. In the event that appraisals on all properties occur, the ten (10) point bonus becomes rather moot and unnecessary. Accordingly, it is recommended that the ten (10) point bonus proposed be deleted.

Because the goals of the Bond Bill Committee and Cabinet Committee on State Planning Issues still have to be met, it is recommended that the Foundation spend up to (as opposed to a minimum of) 75% of the monies available in the target (priority) preservation zone and up to 25% in the non-priority preservation zone. While this creates two pools of competitive bidding, the Foundation avoids a situation where lands outside of the target zone are not protected. The measure also provides a degree of fairness to landowners outside the target zones who have been in the preservation program for many years.

It is recommended that the Amendments to the Regulations as set forth in Exhibit "C" be adopted on the basis of the evidence and information presented and the findings set forth.

POLICIES, PROCEDURES, AND BY-LAWS AS ADOPTED JUNE 1999: EXHIBIT D

are hereby adopted by this Order this 30th day of June, 1999. Effective Date of this order shall be August 10, 1999

Delaware Agricultural Lands Preservation Foundation Board Members

Dr. Donald F. Crossan, Chairperson
Robert F. Garey, Vice Chairperson,
Kent County Representative
Jane T. Mitchell, Secretary, Grange Representative
H. Dennis Clay, Treasurer,
New Castle County Representative
John F. Tarburton, Secretary of Agriculture
Nicholas A. DiPasquale, Secretary of the
Dept. of Natural Resources & Environmental Control
Jack Markell, State Treasurer
Alden Hopkins, Farm Bureau Representative
William W. Vanderwende, Sussex County Representative

*The Delaware Lands Preservation Strategy Chart is not reproducible in the Register. Copies of the Delaware Lands Preservation Strategy Chart are available from the Department of Agriculture or the Registrar.

Delaware Agricultural Lands Preservation Foundation

Policies - Procedures - By-laws
Adopted January 17, 1995
[Revised June 30, 1999]

Table of Contents

*** THE ABOVE PAGE NUMBERS REFER TO THE ORIGINAL DOCUMENT AND NOT TO THE REGISTER.**

LEGISLATIVE INTENT

Delaware farms and farmlands are vanishing at an alarming rate. Thirty-nine percent of the agricultural land in Delaware disappeared in the last 70 years due to commercial and population expansion. In 1920, there were 10,300 farms tilling 944,500 acres of land. In 1990, there were 2,900 farms operating and only 570,000 acres of land dedicated to the profession of farming. These figures impact all Delawareans because agriculture employs more people than any other industry in Delaware and is a leading contributor to the State's economy. If the loss of farmland continues at the current rate, then the State of Delaware will be in danger of losing its number one industry, agriculture.

On JULY 8, 1991, Governor Michael N. Castle signed House Bill 200 to amend Chapter 9, Title 3, of the Delaware Code. The legislation established a comprehensive agricultural lands preservation program to serve the long-term needs of the agricultural community and the citizens of Delaware. It is the declared policy of the State to conserve, protect and encourage improvement of agricultural lands within the State for the production of food and other agricultural products useful to the public which are grown, raised or harvested on land and water in the State of Delaware.

The Agricultural Lands Preservation Foundation was created by this legislation to accomplish this mission by establishing Agricultural Preservation Districts of viable and productive farmland and forest land. The Foundation is directed to provide economic incentives and benefits to agribusiness, purchase development rights from landowners; encourage development in areas where infrastructures exist, and promote the agricultural industry and the concept of preserving viable land for the future. [3 Del. C., §901]

PROGRAM INTENT

The Agricultural Lands Preservation Program was created as a long-term response to the depletion of valuable farmland. It is designed to provide landowners with an incentive to remain in agriculture as opposed to subdividing and selling productive farmland. The Agricultural Lands Preservation Foundation was established to develop and implement a comprehensive agricultural lands preservation program. These program guidelines represent policies and procedures adopted by the Agricultural Lands Preservation Foundation and the "Guidelines for the Delaware Agricultural Lands Preservation Program" section represents an exercise of the Foundation's regulatory responsibilities under 3 Del. C., §904(a) and (b)(21). These guidelines will govern the work of the Foundation. The program contained herein augments CHAPTER 9, TITLE 3 of the DELAWARE CODE.

Delaware's Agricultural Lands Preservation Foundation By-Laws

PREAMBLE

The Agricultural Lands Preservation Foundation, also referred to as the Foundation, accepts and assumes its responsibility to develop and implement a comprehensive agricultural lands preservation program to serve the long-term needs of the citizens of Delaware. In accordance with 3 Del. C., §904 (b)(20), the Foundation hereby adopts these BY-LAWS.

1. ARTICLE I: ORIGIN OF THE ORGANIZATION

On July 8, 1991, Governor Castle signed House Bill 200 which created the Agricultural Lands Preservation Foundation. This organization is established and created as an independent entity by Section 1 of Chapter 9, Title 3 of the Delaware Code.

2. ARTICLE II: MISSION STATEMENT

The Foundation's mission is to develop and implement a comprehensive agricultural lands preservation program for Delaware. Encompassed in the enabling legislation are the following goals for the Foundation:

2.1 Establish criteria for Agricultural Preservation Districts (For the purpose of this document, they will be referred to as "Districts").

2.2 Establish Districts of viable and productive farmland and forest land in accordance with the established criteria.

2.3 Develop and implement an application process that includes County Farmland Preservation Advisory Boards, County Planning and Zoning authorities, and the Foundation.

2.4 Develop a strategy map identifying the critical agricultural areas of the State, to be used as a guide for establishing Districts and purchasing preservation easements.

2.5 Establish criteria for purchasing development rights from landowners in Districts, including the prioritization of purchases in those areas located near and adjacent to designated growth zones.

2.6 Purchase development rights of landowners in a District in accordance with established criteria.

2.7 Encourage development in areas where infrastructures exist.

2.8 Provide economic incentives and benefits to encourage landowners who preserve their land.

2.9 Promote and encourage the preservation and support of agriculture as an industry and a valued occupation.

2.10 Work closely with the Department of Agriculture, Department of Natural Resources and Environmental Control, other state agencies, and private organizations concerned with promoting Delaware's agricultural sector and protecting open space.

2.11 Work with county and local governments to encourage farmland preservation in land use planning and zoning activities.

3. ARTICLE III: ORGANIZATIONAL STRUCTURE

3.1 The Foundation is comprised of nine (9) Trustees, all appointed by the Governor. Each Trustee must be a resident of Delaware and qualified to vote in the State of Delaware.

3.2 The Chairperson of the Foundation, will serve at the pleasure of the Governor and will be confirmed by the Senate.

3.3 The Secretary of the Department of Agriculture or designee, the Secretary of the Department of Natural Resources or designee, and the State Treasurer or designee will serve an indefinite term.

3.4 Each county will have a representative who is actively engaged in agribusiness to serve on the Foundation for an initial period of three (3) years.

3.5 For the four (4) Trustees appointed to the positions indicated in sections 3.2 and 3.4 above, Trustees registered in either major political party shall not exceed the other major political party by more than one (1).

3.6 One (1) representative from the Delaware Farm Bureau, selected from a list of three (3) nominees, will serve for an initial term of two (2) years.

3.7 One (1) representative from the Delaware State Grange, selected from a list of three (3) nominees, will serve for an initial term of two (2) years.

3.8 The Governor will appoint an interim Trustee in the event of a death, permanent disability, resignation, or failure to perform duties of a Trustee. The replacement will serve the unexpired term of the departing Trustee. The Chairperson's replacement must be confirmed by the Senate if his/her residual term exceeds six (6) months. [3 Del. C., §903]

4. ARTICLE IV: OFFICERS

4.1 Other officers of the Foundation besides the Chairperson shall include a Vice Chairperson, a Secretary and a Treasurer.

4.2 The Chairperson shall preside and maintain order at all meetings of the Foundation.

4.3 The Vice Chairperson shall act for the Chairperson in his/her absence.

4.4 The Secretary shall be responsible for recording the minutes of the Foundation meetings.

4.5 The Treasurer shall be responsible for maintaining records of all receipts and disbursements and shall submit a monthly financial report to the Foundation.

5. ARTICLE V: ORGANIZATIONAL FUNCTION

5.1 The Foundation will meet at least quarterly; executive meetings or an emergency meeting may be called by the Chairperson.

5.2 All Foundation meetings, except for executive sessions, are open to the public and advance notice will be given in accordance with applicable statutory requirements. Public hearings shall be conducted in accordance with the requirements of 3 Del. C., §928.

5.3 Minutes of every meeting will be recorded and available to the public. An agenda will be sent to each Trustee no less than seven (7) days before the next scheduled meeting, if feasible, provided however that the agenda may be modified as necessary in advance of a meeting in which case the maximum period of notice will be provided.

5.4 Five (5) Trustees will constitute a *quorum* for conducting business of the Foundation.

5.5 A majority vote of members constituting a *quorum* is required for action on any matter before the Foundation.

5.6 A Trustee is not entitled to vote on any matter

before the Foundation if such Trustee knowingly has a financial interest in the outcome of such matter. The Trustee will inform the Chairperson of his/her conflict of interest and will be recorded in the minutes of the meeting.

5.7 The Foundation may adopt policies and guidelines as necessary for the proper conduct of its work.

5.8 The BY-LAWS will be reviewed periodically by the Trustees.

5.9 Amendments to these BY-LAWS and policies will be introduced with prior notice to the Trustees.

5.10 An Annual Report will be prepared summarizing proceedings and activities for the annual period ending September 30. The Annual Report shall be submitted prior to January 1 following the close of the reporting period. [3 Del. C., §903, §904]

6. ARTICLE VI: ORGANIZATIONAL AUTHORITY GRANTED BY TITLE 3, CHAPTER 9 OF THE DELAWARE CODE

6.1 To purchase, sell, manage, lease, or rent real and personal property for use of the Foundation.

6.2 To seek, obtain, and utilize federal and private funding.

6.3 To accept gifts, grants or loans of funds, property or service from any source, private or public.

6.4 To receive funds from the sale of general bonds, revenue bonds or other obligations of the State or under the name of the Foundation.

6.5 To establish a Delaware Farmland Preservation Fund.

6.6 To recover reasonable costs for service provided and to collect rollback taxes from real estate transactions.

6.7 To adopt procedural rules to govern how internal affairs of the Foundation are conducted.

6.8 To select an Executive Director, who shall be chief executive officer of the staff to the Foundation.

6.9 To employ a staff subject to the availability of funding.

6.10 To retain by contract auditors, accountants, appraisers, legal counsel, surveyors, private consultants, financial advisors, or other contractual services required by the Foundation.

6.11 To delegate to one (1) of its members, its Executive Director or its agent, such powers and duties necessary to conduct authorized business on behalf of the Foundation.

6.12 To adopt, after notice and public hearing, policies and guidelines to fulfill the Foundation's responsibilities.

6.13 To undertake such other activities authorized by the Foundation's enabling legislation and the amendments thereto. [3 Del. C., §904]

7. ARTICLE VII: ORGANIZATIONAL RESPONSIBILITIES

7.1 To develop and implement, after public hearing, a statewide agricultural lands preservation strategy which specifically identifies the areas in which viable, productive agriculture lands are located and which are considered most vital for permanent preservation, and to identify growth zones, and those areas located near and adjacent to designated growth zones to be given priority for acquisition of preservation easements.

7.2 To adopt, after public hearing, criteria for establishing and maintaining Agricultural Preservation Districts.

7.3 To adopt, after public hearing, criteria for establishing and maintaining a program to purchase development rights.

7.4 To establish a program of cooperation and coordination with the counties, municipalities, and other governmental bodies of Delaware and with private non-profit or public organizations to assist in the statewide preservation of agricultural land.

7.5 To monitor and enforce the requirements, restrictions and policies developed by the Foundation.

7.7 To administer, operate, and supervise, the Delaware Farmland Preservation Fund.

7.8 To engage the services of an independent certified public accountant to conduct an annual audit of the Foundation's accounts at the end of each fiscal year.

7.9 To develop and establish a program of education and promotion of agricultural lands preservation.

7.10 To engage in such other activities designed to promote an effective program. [3 Del. C., §904]

8. ARTICLE VIII: PARLIAMENTARY MATTERS

8.1 In all matters not covered in 3 Del. C., Chapter 9 or these By-Laws, Roberts Rules of Order shall apply.

~~[9. ARTICLE IX: ADOPTION~~

~~These BY-LAWS have been adopted at a regular Foundation meeting and are effective as of 1992. 1999, and supercede all prior By-Laws adopted by the Foundation.~~

~~_____~~

~~Date: _____~~

~~Dr. Donald F. Crossan, Chairperson~~

~~_____ Date: _____~~

~~Robert F. Garey, Vice Chairperson~~

~~Kent County Representative~~

~~_____ Date: _____~~

~~Jane T. Mitchell, Secretary~~

~~Grange Representative~~

~~_____ Date: _____~~

~~Dennis H. Clay, Treasurer~~

~~New Castle County Representative~~

~~_____ Date: _____~~

~~John F. Tarburton~~

~~Secretary of Agriculture~~

~~Date:~~

~~Mary L. McKenzie~~
~~Acting Secretary of the Dept. of Natural Resources & Environmental Control~~

~~Date:~~

~~Jack Markell~~
~~State Treasurer~~

~~Date:~~

~~Alden Hopkins~~
~~Farm Bureau Representative]~~

GUIDELINES USED FOR THE DELAWARE AGRICULTURAL LANDS PRESERVATION PROGRAM

The Foundation is granted authority to establish criteria for Agricultural Preservation Districts (hereinafter referred to as "Districts") and the purchase of preservation easements. [3 Del. C. §904]

1. CRITERIA FOR DISTRICT ELIGIBILITY

1.1 In order to qualify for the Agricultural Lands Preservation Program, the lands proposed as a Agricultural Preservation District in the application must meet the following criteria:

a) owner(s) shall hold fee simple title to all land to be placed in a District;

b) must constitute at least 200 acres of contiguous farmland or lesser acreage if the farmlands are located within three (3) miles of an established District;

c)shall be zoned for agricultural purposes and shall not be subject to any major subdivision plan;

d) applicant(s) including all fee simple title holders, must sign a written agreement committing to District restrictions set forth in this Section and 3 Del. C., §909 and other adopted requirements.

e) must be viable and productive agricultural land and meet the minimum County Land Evaluation and Site Assessment (LESA) scoring requirements for eligibility as established by the Foundation.
[3 Del. C., §908 (a)(3)]

f) must include all of the eligible real property located in the tax parcel or tax parcels subject to application.

1.2 For the purposes stated in this chapter, the phrase "viable and productive agricultural land" is defined as land that qualifies under provisions of the Farmland Assessment Act. [9 Del. C., §8329 - 8333]

1.3 The minimum LESA score for an eligible District or Expansion shall be 170 points out of a possible 300 points for each county in the State as computed under the currently approved LESA program of the Delaware Department of Agriculture.

2. APPLICATION PROCEDURES

2.1 The Foundation will provide application forms (Appendix A) on which applicants who volunteer to place their lands into an Agricultural Preservation District will provide the following information:

1. name of petitioner(s)
2. mailing address(es)
3. telephone number(s)
4. property location
   a. county
   b. community name
5. deed or property description
6. area - total acreage of:
   a. cropland
   b. woodland
   c. pasture
   d. aquaculture
   e. tidal wetlands
   f. farm structures
   g. residence/buildings
   h. other
7. land use/zoning designation or designations
8. easements/rights-of-way (identify, if any)
9. mortgages/liens (identify, if any)
   a. mortgagee or lien holder's name or names
   b. date of mortgages or liens
10. number of dwelling units
11. soil and water conservation plan (if any)
12. proof of eligibility under the Farmland Assessment Act
13. evidence of historical significances (if any)
14. information regarding the occupancy of dwelling units on the property

2.2 The Foundation shall provide assistance to potential applicants in completing application forms when requested [3 Del. C., §907 (a)]

2.3 Foundation staff ~~shall~~ may conduct on-site inspections and/or phone interviews with the applicants to acquire data necessary to perform LESA analyses and write a staff report.

2.4 In conjunction with the application, all fee simple owners shall sign a District Agreement (Appendix B) which serves as a declaration in recordable form of acknowledgment of the policies and restrictions that must be followed, and all benefits realized in a District.

3. APPLICATION REVIEW PROCEDURES

The Foundation has the authority to approve applications, establishing Agricultural Preservation Districts and purchasing preservation easements. [3 Del. C., §904]

3.1 The Foundation staff will review applications and determine whether or not the minimum eligibility requirements under Section 1.1 have been met.

3.2 If the minimum eligibility requirements have not been met, then the applicant will be notified by letter from the Foundation indicating that the application does not qualify for further review, and the reasons for ineligibility.

3.3 If an applicant excludes a portion of property otherwise includable in a proposed District, then the Foundation ~~reserves the right to~~ shall deny the application.

3.4 Subject to Section 3.3 above, if the lands proposed as a District in the application meet minimum eligibility criteria, then the Foundation staff will submit to the Foundation, the County Farmland Preservation Advisory Board and the County Planning and Zoning Authority, applications and criteria checklists describing and summarizing the criteria as established in this chapter (see Appendix C).

3.5 If the applicant disagrees with the staff evaluation of the proposed District, then the applicant may contact the Foundation staff to discuss the application review. Foundation staff will meet with the landowner to discuss the review within thirty (30) days from receiving such telephone call or letter.

3.6 If the issue is not resolved to the applicant's satisfaction, he/she may request an administrative review with the Foundation by submitting a letter to the Foundation within fourteen days (14) of the applicant's last meeting with Foundation staff.

3.7 This letter must include reasons and documentation to justify the applicant's claim(s).

3.8 Within seven (7) working days from the receipt of the landowner's letter, the Foundation will schedule a meeting and notify the applicant by certified letter of the date, time, and place of the meeting, at least seven (7) days in advance.

3.9 At the administrative review meeting, the applicant(s) shall present information or documentation as to how the proposed District satisfies the eligibility criteria.

3.10 The Foundation will render a decision within thirty (30) days from the administrative review meeting and notify the applicant in writing of its decision.

4. CREATION OF A DISTRICT

4.1 To establish an Agricultural Preservation District, the application must be approved by two out of three of the entities listed under section 3.4 of these guidelines. [3 Del. C., §907 (c)]

4.2 After review by the Foundation, the application is subject to a review period of thirty (30) days in which the Secretary of Agriculture may reject the application. The application is officially approved at the end of the review period, if it is not rejected by the Secretary of Agriculture. [3 Del. C., §919]

4.3 The property legally becomes a District when the applicant and Foundation Chairperson (or designee) have signed the District Agreement and no rejection has been exercised by the Secretary of Agriculture, or the Secretary of Agriculture has specifically approved the application.

4.4 Copies of the District Agreement shall be filed with the County Planning and Zoning and Tax Assessor's Offices and recorded in the Office of the Recorder of Deeds. The Foundation shall require from these Offices proof of recording and/or receipt of the District Agreement.

4.5 ~~Applicants shall receive~~ The Foundation shall endeavor to provide written notification of the date of establishment of the Agricultural Preservation District and ~~shall receive~~ provide a copy of the District Agreement to the applicant, however, the failure of the Foundation to satisfy any formality following execution of a District Agreement shall not affect the validity of the District Agreement.

5. DISTRICT RESTRICTIONS

5.1 Any rezoning or major subdivision of real property included in an Agricultural Preservation District is prohibited. [3 Del. C., §909 (a)(1)]

5.2 The submission of applications or preliminary rezoning or subdivision plans for any property within an Agricultural Preservation District to a county or municipality shall be considered evidence of the intent to rezone or subdivide and is prohibited.

5.3 All activities on the property shall be limited to "agricultural and related uses." l[3 Del. C., §909 (a)(2)]

5.4 For the purposes of ~~this chapter~~ these guidelines, the phrase 'agricultural and related uses' shall be defined as, all forms of farming including but not limited to, agriculture, horticulture, forestry, aquaculture, or silviculture as defined in the Farmland Assessment Act of 1968 [9 Del. C., Chapter 83] and 3 Del. C., §403 or by the National Agricultural Statistics Service.

5.5 Excavation or filling, borrow pits, extraction, processing and removal of sand, gravel, loam, rock or other minerals is prohibited unless such action is currently required by or ancillary to any preparation for, or operation of any activities including, but not limited to: aquaculture, farm ponds, cranberry operations, manure handling facilities, and other activities directly related to agricultural production.

5.6 Activities that would be detrimental to drainage, flood control, water conservation, erosion control or soil

conservation are prohibited;

5.7 Any other activity that might negatively affect the continued agricultural use of the land is prohibited.

5.8 The term "usable land owned in the district" [3 Del. C., §909 (a)(2)], shall be defined as any land meeting the requirements for agricultural, horticultural or forest land in the Farmland Assessment Act of 1968 [9 Del. C., Chapter 83] and 3 Del. C., §403 or criteria for farm definition as established by the National Agricultural Statistics Service.

5.9 The District Agreement and District requirements and benefits shall be binding on the heirs, successors and assigns of property owners of lands within a District. A property owner in a District shall provide written notice to a successor or assign in advance of the date of transfer of the property that the property is subject to District restrictions. The party taking title shall execute a ~~written acknowledgement that the transferred property is subject to District restrictions~~ document as required by 3 Del. C.§909(a) (2) (iii) acknowledging the acreage allowed for dwelling housing and the restrictions which apply to the property.

5.10 Under 3 Del. C., §909 (a)(3), all restrictions shall be covenants which run with and bind the lands in the District for a minimum of ten (10) years, beginning when the District Agreement takes effect as specified in ~~section 4.3 of these guidelines.~~ the District Agreement.

6. CONTINUATION OF A DISTRICT

6.1 All properties are to remain in an Agricultural Preservation District for at least ten (10) years, subject to the allowance of hardship exceptions for exclusion of dwelling pursuant to 3 Del. C.§909(a) (2) (ii) and Section 9 of these guidelines.

6.2 If a landowner wishes to withdraw from, or terminate a District, then the Foundation must receive a written notice of intent to withdraw no less than six (6) months prior to the ten (10) year anniversary date of initial establishment of the District. [3 Del. C., §909 (b)]

6.3 If the Foundation does not receive a written notification of the landowner's intent to withdraw from the District six (6) months prior to the ten (10) year anniversary date of that District, then the land shall remain in the District, unless notice of intent to withdraw shall be given within six months of the end of each additional five-year period.

7. EXPANSION OF A DISTRICT

7.1 An Agricultural Preservation District can be expanded for the purpose of preserving additional lands. Lands added to a District may be under 200 acres. [3 Del. C., §907 (d)]

7.2 Land which is less than 200 usable acres, yet meets the other criteria established by the Foundation is eligible to be an expansion of an Agricultural Preservation District if it is within ~~one mile~~ three (3) miles of any portion of an established Agricultural Preservation District. [3 Del. C., §907 (a)]

~~7.3 The Foundation will re-evaluate Districts at the time of removal of any lands. If any remaining parcels of land subsequently fail to meet the minimum requirements for a District as set forth in 3 Del. C., §908, then the Foundation, after notice to the owner or owners, may terminate the District Agreement(s) upon expiration.~~

8. INSPECTION OF DISTRICTS

The Foundation has the authority to enter upon lands as may be necessary to perform surveys, appraisals, and investigations to accomplish its mission; consistent with applicable statutes. [3 Del. C., §904 (b)(14)]

8.1 The Foundation or its designee reserves the right to inspect restricted land and enforce agreements on its own behalf.

8.2 If any violations of the terms and the conditions of the District Agreement occur, the Foundation may institute proceedings in the appropriate court to enforce the terms and seek appropriate relief. [3 Del. C., §920 (a)]

9. DWELLING PROPERTY HARDSHIP EXCEPTIONS

In accordance with 3 Del. C. §909(a) (2) (ii), the legal or equitable owners of real property subject to a District Agreement or Preservation Easement are entitled to apply to the Foundation for a hardship exception allowing for the transfer of dwelling property to parties who are not otherwise entitled to residential use of the dwelling property under the District Agreement or Preservation Easement, subject to the provisions of **[3 Del. C.]** §909(a) (2) (ii) and the following requirements.

9.1 An applicant for a hardship exception shall submit the following information in writing to the Foundation:

1. name and property interest of the applicant in the dwelling property
2. acreage of the dwelling property subject to application
3. date on which the District was established
4. number of dwellings and acreage of residential use currently on the property in the District
5. the nature of the hardship condition and reasons justifying the granting of a hardship exception
6. the extent to which the hardship condition is unavoidable

9.2 The Foundation shall consider hardship conditions

involving the following circumstances:

1. the sale or transfer of the dwelling property compelled by foreclosure, court order, or marital property division agreement.

2. the sale or transfer of the dwelling property compelled by job transfer.

3. the sale or transfer of the dwelling property compelled by health conditions.

4. the sale or transfer of the dwelling property required to avoid insolvency or bankruptcy.

5. other circumstances of an unusual and extraordinary nature which pose a practical hardship to continued ownership of the dwelling property and which are unavoidable.

9.3 Hardship exceptions will not be granted when no real hardship exists and the primary consequence of the sale or transfer of the dwelling property is financial gain.

9.4 The applicant shall bear the burden of establishing the existence of hardship circumstances, and shall provide to the Foundation documentation in support of the application, and any documentation requested by the Foundation, provided however, that documentation involving privileged information may be submitted on a confidential basis.

9.5 The Foundation may require the applicant for a hardship exception to appear before the Foundation Board to present the application, and an applicant shall be entitled to appear before the Board to make a presentation by submitting a written request to the Foundation.

9.6 The granting of a hardship exception by the Foundation shall be subject to the following conditions:

1. the dwelling property following transfer shall be used only for residential purposes.

2. the transferred property shall not qualify for District benefits or benefits of Preservation Easements.

3. if the transferred property is subject to a Preservation Easement prior to transfer, payment shall be made to the Foundation in an amount equal to twenty-five (25) percent of the current fair market value of the land subject to transfer.

4. the transferee shall execute a Declaration in recordable form as prescribed by the Foundation which includes the acreage allowed for dwelling housing and the restrictions which apply to the real property.

5. the Foundation may require the transferor to execute a Declaration in recordable form as prescribed by the Foundation to evidence the status of allowable dwelling housing property on lands retained by the transferor which are in the District or subject to a Preservation Easement.

6. such other terms and conditions considered necessary by Foundation to address the nature of the hardship condition.

DELAWARE FARMLAND PRESERVATION FUND

~~9.~~ ~~INTENT~~

The Delaware Farmland Preservation Fund, hereinafter referred to as the "Fund" was enacted under 3 Del. C., §905 for the exclusive application by the Foundation to achieve the desired goals of preserving viable agricultural lands and conducting the business of the Foundation.

10. AUTHORITY

10.1 The Foundation Trustees shall manage and administer the Fund according to the requirements as stated in 3 Del. C., §905. A Trustee shall be elected as Foundation Treasurer to monitor and supervise the Fund.

10.2 The Foundation has the authority to hire an Executive Director and any other staff necessary to accomplish its mission. Salaries for these positions and retention of consultants and other professionals will be paid from the Fund.

10.3 The Foundation members, by a majority vote, can purchase all the necessary materials, equipment, and services to perform its mission. All necessary expenses incurred by the Trustees to enable the performance of their duties are paid from the Fund.

10.4 The Foundation has the authority to establish accounts at any bank or financial institution, purchase certificates of deposit or other appropriate investment instruments.

10.5 Any two officers, or one officer and a designated staff person, are authorized to sign checks and drafts against any accounts established by the Foundation, providing such expenditures have been budgeted or specifically approved by the Board.

11. SOURCES OF FUNDING

11.1 The Foundation may accept donations, property, or development rights as gifts and monetary gifts from any source, public or private.

11.2 Monies not needed on a current basis by the Foundation will be invested with the approval of the Board of Trustees.

11.3 The Fund is subject to an annual audit to be prepared by an independent, certified public accountant. The findings of all audits shall appear in the Foundation's Annual Report.

11.4 The Foundation shall manage the monies appropriated to it by the General Assembly in accordance with the terms of the appropriations.

CRITERIA FOR THE PURCHASE OF AGRICULTURAL LANDS PRESERVATION EASEMENTS {3 DEL.C., §904(a)(2)}

12. INTENT

12.1 The intent of this section is to provide a framework for the acquisition of Agricultural Lands Preservation Easements (hereinafter referred to as "Preservation Easements") to protect in perpetuity those lands of the state most suitable for long-term agricultural production, ~~and~~ to preserve a sufficient critical mass of agricultural land to insure the economic viability of the agriculture industry, and to protect farmland from development in those areas located near and adjacent to designated growth zones.

12.2 The Foundation will place greatest emphasis on acquiring Preservation Easements in areas where significant agricultural acreage can be maintained for long-term agricultural production and prioritize acquisitions in areas located near and adjacent to designated growth zones.

12.3 Based on the long range goal ~~of preserving a sufficient critical mass~~, the Foundation will give primary consideration to the Agricultural Lands Preservation Strategy Map for the State of Delaware {3 Del.C., §904(a)(2)} in the acquisition of Preservation Easements.

12.4 In the criteria established for the prioritization of Preservation Easements, the Foundation will also give weight to the Land Evaluation and Site Assessment (LESA) score for the subject parcel, and the eligibility criteria used in the establishment of agricultural districts, and factors designed to prioritize acquisitions in areas located near and adjacent to designated growth zones.

13. SCHEDULE FOR ACQUISITION OF AGRICULTURAL LANDS PRESERVATION EASEMENTS

13.1 Recognizing that voluntary applications by agricultural preservation district landowners may exceed available funds for the procurement of Preservation Easements, it is necessary to establish a procedure for pooling, reviewing, prioritizing, and funding applications for permanent Preservation Easements.

13.2 Application and funding cycles will take place ~~in six month intervals, starting at the beginning of the Foundation's fiscal year, October 1~~ on schedules established by the Foundation.

13.3l Applications for the purchase of Preservation Easements ~~received between October 1 and March 31 in each fiscal year cycle will be pooled together for review during the period April 1 through June 30, and for funding decisions to be made on these applications during the period July 1 through September 30.~~ in Rounds of Purchases shall be subject to deadlines established by the Foundation.

13.4 ~~Funding decisions pertaining to applications received between October 1 and March 31 will be announced during the last ten days of the Foundation's fiscal year (September 21-30).~~ For each Round of Preservation Easement Purchases the Foundation shall rank the applications in the Round in accordance with the criteria set forth in Section 13. Following the ranking the Foundation shall establish a cut-off score, and arrange for the appraisal of the Preservation Easement value of those properties at or above the cut-off score.

13.5 ~~Applications received between April 1 and September 30 of each fiscal year will be pooled together for review during the period October 1 through December 31, and for funding decisions to be made on these applications during the period January 1 through March 31.~~ Upon completion, the appraisals shall be provided to the landowners, and procedures set forth in Section 23 involving offers for the sale of preservation easements shall be initiated.

13.6 ~~Funding decisions pertaining to applications received between April 1 and September 30 will be announced during the last ten days of March (March 22-31).~~ After receipt of offers for the sale of preservation easements, the Foundation shall review the offers and announce the selections in accordance with the provisions of Section 23.

13.7 ~~The Foundation is under no obligation to purchase a permanent Preservation Easement which is offered for sale.~~ Following the selection of properties for acquisition of Preservation Easements, the Foundation shall arrange for surveys of the properties to be conducted, and proceed to settlement under the terms of the Option Agreements, subject to the availability of funding and satisfaction of regulatory, financial or other restrictions or limitations.

13.8 The Foundation is under no obligation to purchase a Preservation Easement which is offered for sale. 3 Del.C., §913.

14. ~~LOCAL~~ MATCHING CONTRIBUTIONS TO THE PROGRAM

14.1 The Foundation may establish a reserve of available funds for the matching of federal, county, state, ~~or~~ local, or private funds for the preservation of farmland.

15. ELIGIBILITY CRITERIA FOR AGRICULTURAL LANDS PRESERVATION EASEMENTS

The criteria for eligibility of acquisition of a

Preservation Easement shall be the same as the criteria for district eligibility. In addition, offered preservation easement lands shall be in an established district and in compliance with district requirements to be eligible.

16. APPLICATION PROCEDURES

16.1 A separate application shall be required for each farmland tract (operating farm unit) offered for Preservation Easement purchase. ~~The application shall consist of a completed application form, location maps, a soils report and a crop report~~ The Foundation shall not be obligated to process any incomplete application.

16.2 The Foundation shall develop, and make available to landowners or other interested parties, an application form which requires the following information (See Appendix E):

1. Name, address, telephone number and signature of the owner of the farmland tract.

2. County, municipality or hundred, and Agricultural Preservation District in which the farmland tract is located.

3. Total acreage of the farmland tract and the number of acres of that tract proposed for Preservation Easement purchase.

4. Street/Road location of the farm, and directions from the nearest State route.

5. Deed reference - book, volume and page.

6. County tax map records, including tax parcel number, or account number of each parcel.

7. If a conservation plan has been approved by the County Conservation District, specify the date of the plan.

8. Name, address and telephone number of the person to be contacted to view the farmland tract.

~~9. Declaration of assurance that the applicant has good title to the premises, free of encumbrances such as liens, mortgages, options, rights of others in extraction or mineral rights, land use restrictions, adverse ownership interest, and other encumbrances which would adversely impact the Preservation Easement interest in the farmland tract, or that any such encumbrances would be subordinate to the Preservation Easement to be conveyed to the Foundation.~~

16.3 The applicant shall provide the following information on the application:

1. Major assets and investments related to agricultural production such as buildings, packing equipment, dairy equipment, irrigation/water supply, etc.

2. Use of the land for the most recent crop year.

16.4 The applicant shall provide information on the farmland tract for the highest three crop production years out of the last five crop years on crops where comparable statistics are available from the Delaware Agricultural Statistics Service (DASS) on the Crop Production/Livestock Production form (See Appendix E).

16.5 The applicant shall provide a livestock report for the farmland tract for the most recent calendar year for which comparable statistics are available from the Delaware Agricultural Statistics Service (DASS) on the Crop Production/Livestock Production form (See Appendix E).

16.6 If the applicant grows crops or produces livestock that are of a type not reported by DASS, the ~~Foundation~~ applicant shall ~~obtain~~ provide two years of production data ~~from the applicant~~ to the Foundation.

17. REVIEW AND EVALUATION OF AGRICULTURAL LANDS PRESERVATION EASEMENT APPLICATION

~~17.1 Application periods shall be October 1 - March 31, and April 1 - September 30.~~

17.~~2~~ 1 The Foundation shall review the application to determine if it is complete and meets the minimum criteria set forth in Section 15.

17.~~3~~ 2 If the application is complete and the minimum criteria are met, ~~an agent or member~~ a representative of the Foundation ~~Board of Trustees~~ shall view the farmland tract ~~and discuss the Preservation Easement program with the applicant.~~

17.~~4~~ 3 The Foundation shall for each Round of Preservation Easement Purchases evaluate applications which meet the minimum criteria ~~during the two review periods; April 1 - June 30, and October 1 - December 31 of each year, and rank them according to the Foundation's weighting system for prioritizing Preservation Easements. The Foundation shall then determine whether to appraise the farmland tract.~~ and rank the applications in accordance with the criteria of Section 18. **[Notwithstanding the ranking procedure set forth in Section 18, the Foundation shall be entitled to have all eligible properties appraised and considered for purchase of Preservation Easements pursuant to Section 22.]**

18. ~~WEIGHTING AND SCORING SYSTEM FOR PRIORITIZING~~ RANKING CRITERIA FOR AGRICULTURAL LANDS PRESERVATION EASEMENT~~S~~ APPLICATIONS

18.1 A ~~guidance weighting~~ system for ranking Preservation Easement applications is established to assist the Foundation in reaching a final decision.

18.2 ~~Four Five~~ **[Four]** categories will be utilized to ~~initially~~ rank the Preservation Easement applications during the Foundation's review periods with a maximum score of 100 points, ~~**[with 10 points added to establish a priority**~~

~~for ranking applications for farms near or adjacent to designated growth zones (Priority Preservation Areas).]~~

18.3 Agricultural Lands Preservation Strategy Map - 50 Points.

In order to follow a rational, statewide plan for the acquisition of development rights on agricultural lands, the Foundation will give weight to applications for sale of Preservation Easements according to location on the Agricultural Lands Preservation Strategy Map. Scoring will be based on location relative to preservation categories on the map:

Class I = 50 Points
Class II = 40 Points
Class III = 25 Points
Class IV = 15 Points
Class V = 0 Points

Land will be categorized according to which class comprises the majority of the active cropland on the farm. Farms within two or more classes ~~may~~ shall be placed in the predominant class.

18.4 LESA Score - 20 Points.

Weight will be given to the LESA scoring on parcels being submitted for the purchase of permanent Preservation Easements. Using the highest LESA score for an Agricultural Preservation District within the county as 100%, and 170 points as 0%, then:

~~76~~ greater than 75-100% = 20 Points
~~51~~ greater than 50-75% = 15 Points
~~26~~ greater than 25-50% = 10 Points
0-25% = 0 Points

Farms with tidal wetlands and other non-productive lands will receive a LESA score based on the cropland and forest land ~~proposed for~~ subject to Preservation Easement acquisition by the Foundation.

18.5 Productivity of current farm operations - 15 Points.

Weight will be given to the current level of productivity exhibited on the land where a Preservation Easement is offered for sale. The score is based on the type of farming being pursued, the value of investments in agriculture and the recent, proven yields of the operation.

Investment:High (upper 1/3 for type of operation) = 4 points
See Appendix FMedium (middle 1/3 for type of operation = 2 points
Low (lower 1/3 for type of operation) = 0 points

Management:Excellent = 4 points
Average = 2 points
Low = 0 points

Past Yields:High (greater than 110% or more of state avg.)= 4 points
Medium-High (greater than 90% - ~~109~~ 110 % of state avg.)= 3 points
Medium (greater than 70% to ~~89~~ 90 % of state avg.)= 2 points
Low (~~less than~~ less than or equal to 70% of state avg.)= 0 points

Farms reporting more than one crop will receive points based on the average of points computed for each crop.

Type of High value/intensity = 3 points
Of operation:Medium-High value/intensity = 2 points
See Appendix FMedium value/intensity = 1 point
Low value/intensity = 0 points

18.6 Other factors - 15 Points.

Other criteria for eligibility used in the determination of areas to be included in the Agricultural Preservation District program will be taken into account in the decision to procure a Preservation Easement. Scores will be based on the consideration of factors specified in 3 Del. C., §908(b), relative to the Preservation Easement application.

1. The extent to which long-term preservation of the farmland and forestland is consistent with land use plans adopted at the state ~~and~~ or county levels.

2. ~~The permanent protection of farmland that is near or adjacent to protected open space~~. The subject property is contiguous to protected open space.

3. ~~The impact that the procurement of the Preservation Easement would have on the expansion of existing agricultural districts and the purchase of Preservation Easements on other lands in the future.~~ The subject property is contiguous to existing agricultural districts or permanently protected farmland.

4. ~~The socio-economic benefits derived from the long-term preservation of the agricultural land, and the history of the surrounding area and the role that it has played in Delaware agriculture.~~ The extent to which the subject property provides documented historic, cultural, archeological, or socio-economic benefits for Delaware agriculture.

5. ~~The potential of a Preservation Easement in this area for reducing development pressures on adjacent and~~

~~nearby farmlands~~. The potential of a Preservation Easement in this area for reducing development pressures on adjacent and nearby farmlands and is officially documented as a high priority for preservation by another state agency or a county.

6. Lands that have implemented resource protection measures as approved by the Delaware Department of Natural Resources and Environmental Control.

An application will receive the following scores:

4 or more factors present= 15 points
3 " "= 10 points
2 " "= 6 points
1 " "= 3 points
0 " "= 0 points

[~~18.7 Priority Preservation Areas - 10 Points~~

~~For applications for properties which are located in, or which border in part, any Priority Preservation Area as shown on the Priority Preservation Area Map adopted by the Foundation, an additional ten (10) points shall be added to the ranking score for the application.~~]

~~19. NON-SCORING FACTORS FOR CONSIDERATION~~

~~The Foundation may consider the following additional factors beyond the weighting and scoring system and minimum criteria on an application which may affect the decision to purchase a Preservation Easement.~~

~~19.1 Discount to Appraisal - A discounted sale price of a Preservation Easement versus the appraised value of the Preservation Easement will be considered after the ranking of applications with appraisals.~~

~~19.2 Availability of Other Funding Sources - The availability of additional funding from private or public sources to assist in the purchase of a Preservation Easement shall be considered.~~

~~20.~~19.APPRAISALS [3 Del. C., §916]

~~20.1~~ 19.1l An offer to purchase a Preservation Easement shall be based upon one or more appraisal reports which estimate the full market value of the land under its agricultural zoning designation and the agriculture-only value of the farmland tract.

~~20.2~~19.2 An appraisal to the extent possible shall be based primarily on an analysis of comparable sales.

~~20.3~~19.3 ~~The value of buildings or other improvements on the farmland tract may be considered in determining the Preservation Easement value. The value of the buildings or other improvements shall appear separately in appraisal report.~~ Excluded from the value of the Preservation Easement shall be the value of the one (1) acre of land for each dwelling structure on the property.

~~20.4~~ 19.4 The appraiser shall be:

1. An independent, licensed real estate appraiser who is qualified to appraise a property for easement purchase. An appraiser shall be selected on the basis of experience, expertise and professional designation, and

2. A member of an organization which subscribes to the "Uniform Standards of Professional Appraisal Practice" published by the Appraisal Standards Board of the Appraisal Foundation, and shall follow their ethical and professional standards.

~~20.5~~ 19.5 The appraiser shall supply a narrative report which contains the following information and is in the following format:

1) Introduction
   a. Professional qualifications of the appraiser
   b. Letter of transmittal or appraiser certificate
   c. Table of contents
   d. Summary of salient facts and conclusions
   e. Purpose of the appraisal
   f. Easement value definition as provided in 3 Del. C. §916(a).
2) Description of property
   a. Area or neighborhood description
   b. Description of appraised property
      i. Legal description
      ii. Property data and zoning
      iii. Description of improvements
      iv. Photos and sketches (if available) of subject property
      v. Tax map of subject property. In instances where the county does not have tax maps available, the sketch map required under vi below shall include the boundary lines and acreage of properties adjoining the subject property and the names of all adjoining property owners
      vi. Location map
      [~~vii.~~ ~~Soils map~~]
      ~~ix.~~ vii.Development constraints. The appraiser shall report whether the farmland tract has public or private land use restrictions, is within a flood plain, or has other physical attributes which limit its developmental capability
3) Analyses and conclusions
   a. Analysis of highest and best development use
   b. Full market valuation
      i. Comparable sales data
      ii. Adjustment grid
      iii. Location map of comparable sales
      iv. Market value estimate
   c. Agriculture-only valuation
      i. Comparable sales data or value based on income capitalization
      ii. Location map of comparable sales (as applicable)
      iii. Agriculture-only value estimate
   ~~d.~~ ~~Value of Improvements~~

~~e.~~ d. Agricultural Lands Preservation Easement value

~~20.6~~ 19.6 The appraiser shall provide at least one original and ~~four~~ three copies of each report to the Foundation. The original of each report and all copies shall be bound with rigid covers.

~~21.~~ 20. COMPARABLE SALES DATA

The appraiser shall supply information concerning comparable sales as follows:

1) At least four comparable sales shall be used for an appraisal. If the appraiser cannot obtain sufficient comparable sales data within the same general area as the subject farmland tract, the appraiser may use comparable sales from other areas within the county, state or outside the state, after consultation with the Foundation. The use of comparable sales which require adjustment of 50% or more is permitted only with the approval of the Foundation.

2) Pertinent data for each comparable sale used in the preparation of the appraisal shall be stated in the appraisal report, including date of sale, purchase price, road frontage in feet, soil series, an estimate of the range of slope and other relevant information. The appraisal shall include an analysis comparing the pertinent data for each comparable sale to the subject farmland tract.

3) The location of each comparable sale used in the appraisal report shall be shown accurately on the comparable sales map and sufficiently identified and described so as to be located easily.

4) For comparable sales used to estimate the agriculture-only value, the appraiser may use sales of land that are confined to agricultural use because of legal restrictions or physical impairments that make the land valuable only for agricultural use. Data may also be gathered from farm real estate markets where farms have no apparent developmental value.

5) If comparable sales data is not available for agriculture-only value, the Foundation may assign an agriculture-only value based on crop production and/or a capitalization of rental income.

~~22.~~ 21. AGRICULTURAL LANDS PRESERVATION EASEMENT VALUE AND PURCHASE PRICE

~~22.1~~ 21.1 The value of a Preservation Easement in perpetuity ~~for purposes of making an offer to purchase a Preservation Easement under Section 18.2~~ shall be the difference between the full market value and the agriculture-only value contained in the appraisal report.

~~22.2~~ 21.2 The price ~~offered~~ paid by the Foundation for the purchase of a Preservation Easement ~~under Section 18.2~~ may not exceed, but may be less than the value of the Preservation Easement. 3 Del. C. §916(a)

21.3 In the event an applicant is not satisfied with the appraisal provided by the Foundation, the applicant shall be entitled to have an independent appraisal performed at the applicant's expense by a qualified appraiser as specified in Section 19. The alternative appraisal shall be prepared in the same format as the Foundation's appraisal and shall be submitted to the Foundation within forty-five (45) days of the applicant's date of receipt of the appraisal provided by the Foundation. The forty-five (45) day period may be extended by the Foundation provided the time extension does not delay the time frame established by the Foundation for making selection and acquisition decisions.

21.4 The review of the alternative appraisals by the Foundation shall be based on written submissions under such procedures as specified by the Foundation.

21.5 The maximum adjusted Preservation Easement value which the Foundation will accept is the difference between the agriculture-only value and the full market value, determined as follows:

(a) The agriculture-only value shall equal the sum of:

i. The agriculture-only value determined by the applicant's appraiser and

ii. Up to one-half of the positive difference between the agriculture-only value determined by the Foundation's appraiser and his/her values which exceed those determined by the applicant's appraiser.

(b) The full market value shall equal the sum of:

i. The full market value determined by the Foundation's appraiser, and

ii. Up to one-half of the positive difference between the full market value determined by the applicant's appraiser and his/her values which exceed those determined by the Foundation's appraiser.

~~23.~~ 22. l OFFER OF PURCHASE BY THE FOUNDATION

~~23.1~~ 22.1 The Foundation has the authority to incorporate bidding and/or negotiation as part of the procurement process. 3 Del. C., §915

22.2 The Foundation has incorporated the evaluation criteria for acquisition of Preservation Easements in the evaluation of applications using the ranking system of Section 18 **[subject to the allowance provided under Section 17.3]**. In reviewing the offers of applicants to sell Preservation Easements to the Foundation, the Foundation shall, subject to adoption by Resolution of any alternative criteria by the Foundation to satisfy special objectives, select those offers providing the highest level of percentage donation or percentage discount to the finally appraised value of the Preservation Easement, in accordance with the procedures and requirements of this Section.

22.3 The applications for sale of Preservation Easements selected for appraisal shall be divided into two categories; (1) priority preservation area applications for those properties located in whole or in part in a priority preservation area as shown on the Priority Preservation Area Map, and (2) non-priority **[preservation]** applications.

22.4 The Foundation shall accept offers in the form of Option Agreements from all eligible applicants who wish to submit offers, and after all offers are received, list the offers with the highest to the lowest level of percentage donation or percentage discount to the finally appraised value of the Preservation Easement for each of the two categories of applications.

22.5 **~~[For the category of priority preservation area~~**

applications, the percentage donation or percentage discount offer provided by the applicants shall be reduced by twenty (20) percent (for example, an offer of a forty (40) percent donation or discount would be reduced to twenty (20) percent for purposes of evaluation and purchase) if the funding for the acquisition of the Preservation Easement has a matching requirement of twenty (20) percent and the matching requirement has been waived. In no event shall any purchase of a Preservation Easement be for an amount greater than the appraised value, and the Foundation shall be entitled to reject any offers.] Of the monies available to the Foundation in a Round of Purchases of Preservation Easements, **[at least up to]** seventy-five (75) percent of the monies shall be committed for Preservation Easements on properties located in priority preservation areas and **[up to twenty-five (25) percent of the monies shall be committed for Preservation Easements on properties in non-priority preservation areas.]** The priority for making purchases of Preservation Easements in **[priority each category of]** preservation area**[s]** shall be those offers providing the highest percentage level of donation or discount. **[after adjustment for any applicable donation or discount reduction.]**

[22.6 For the category of non-priority applications, the Foundation shall commit the balance of the monies available after commitment to priority preservation area purchases for purchases of Preservation Easements in non-priority areas. The priority for making purchases of Preservation Easements in non-priority areas shall be those offers providing the highest percentage level of donation or discount.]

22.**[76]** Notwithstanding the priority and non-priority requirements set forth in this Section, the Foundation (1) shall be entitled to accept donations of preservation easements under such terms and conditions that may be imposed in the donations, provided the preservation easements contain the restrictions imposed under 3 Del. C. Ch. 9 and (2) the Foundation shall be entitled to participate in programs which make monies available for the purchase of preservation easements, subject to the requirements of such programs, provided the preservation easements contain the restrictions imposed under 3 Del. C. Ch. 9.

23.2 In determining whether to offer to purchase a Preservation Easement, the Foundation shall consider the following:

1) Evaluation according to the Foundation's weighting and scoring system under Section 18 of these regulations.

2) Consistency with the Agricultural Lands Preservation Strategy Map.

3) Discount to appraisal (Section 19.1).

4) Availability of other funding sources (Section 19.2).

5) Proximity to other lands subject to Preservation Easements.

6) Cost relative to total allocations and appropriations.

23.3 If the Foundation approves an offer to purchase a Preservation Easement on the farmland tract, the Foundation, or a representative of the Foundation, shall meet with the applicant to review the appraisal report. The Foundation or its representative shall negotiate the lowest agreeable price with the applicant as provided in 3 Del. C., §915. The Foundation may also receive as gift or bequest, in whole or in part, the Preservation Easement proposed, as specified in 3 Del. C., §904(b)(11).

23.4 An offer to purchase a Preservation Easement shall be submitted to the applicant in writing and be accompanied by the appraisal report.

23.5 Within 30 days of receipt of the written offer from the Foundation, an applicant may do one of the following:

1) Accept the offer, in which case the Foundation and the applicant shall enter into a contract of sale. The contract shall be subject to the ability of the applicant to provide good title to the premises, free of encumbrances such as liens, mortgages, options, rights of others in extraction or mineral rights, land use restrictions, adverse ownership interest, and other encumbrances which would adversely impact the Preservation Easement interest in the farmland tract, or a subordination of any such encumbrance which is satisfactory to the Foundation.

2) Reject the offer and advise the Foundation that the application is withdrawn.

3) Advise the Foundation that the applicant is retaining, at applicant's expense, an independent licensed real estate appraiser to determine a Preservation Easement value. The appraiser shall be qualified and the appraisal shall be completed under Section 20 of these regulations. The appraisal shall be submitted to the Foundation within 120 days of receipt of the Foundation's offer to purchase. Upon completion, three copies of the applicant's appraisal shall be submitted to the Foundation. The applicant's decision to obtain an independent appraisal under this paragraph shall not constitute a rejection of the Foundation's offer. The Foundation's offer shall remain open unless increased by the Foundation under subsection 23.5.4 or rejected by the applicant under subsection 23.5.2.

4) If the applicant retains an independent appraiser, the maximum adjusted Preservation Easement value may be the difference between the agriculture-only value and the full market value, determined as follows:

a. The agriculture-only value shall equal the sum of:

i. The agriculture-only value determined by the applicant's appraiser and

ii. Up to one-half of the positive difference between the agriculture-only value determined by the Foundation's appraiser and his/her values which exceed those determined by the applicant's appraiser.

b. The full-market value shall equal the sum of:

i. The full market value determined by the Foundation's appraiser, and

ii. Up to one-half of the positive difference between the full-market value determined by the applicant's appraiser and his/her values which exceed those

~~determined by the Foundation's appraiser.~~

~~5)~~ ~~The Foundation shall, within 30 days of receipt of the applicant's appraisal:~~

~~a.~~ ~~Submit a written offer to purchase in an amount in excess of the amount offered under subsection 23.4 to the applicant; or~~

~~b.~~ ~~Notify the applicant, in writing, that the offer made under subsection 23.4 remains open and will not be modified.~~

~~6)~~ ~~The applicant shall, within 30 days of receipt of the Foundation's written offer or notice under subsection 23.5.4 notify the Foundation in writing that the applicant either accepts or rejects the offer(s) made under subsections 23.4 and 23.5.5.~~

~~7)~~ ~~If the offer of purchase is accepted, the Foundation and the applicant shall enter into a contract of sale containing the same requirements and subject to the same conditions as set forth in Sections 5 and 8 of these regulations.~~

~~8)~~ ~~Failure by the applicant to act within the time frames set forth under this subsection shall constitute a rejection of the Foundation's offer.~~

~~23.6l~~ ~~The contract of sale shall be in a form acceptable to the Foundation.~~

~~23.7l~~ ~~Settlement will be scheduled at a time and place convenient to both buyer and seller.~~

~~24.~~ 23. THE AGRICULTURAL LANDS PRESERVATION EASEMENT ~~DEED~~

~~24.1~~ 23.1 The owners of the subject farmland tract shall execute a ~~deed~~ document conveying the Preservation Easement which ~~deed~~ document shall be in the form of Appendix F, or such other form which contains conditions contained in Option Agreements executed by landowners.

~~24.2~~ 23.2 The ~~deed~~ document shall be in recordable form and contain:

1) A legal description setting forth the metes and bounds of the farmland tract subject to the Preservation Easement.

2) At least one course and distance referencing a fixed marker or monument of a type commonly placed in the field by a surveyor.

~~24.3~~ 23.3 The legal description shall not contain a closure error greater than one foot per 200 linear feet in the survey.

~~24.4~~ 23.4 The farmland tract on which a Preservation Easement is to be purchased must be surveyed ~~unless the legal description contained in the deed recorded in the land records of the county in which the farmland tract is located satisfies the requirements of Sections 24.2 and 24.3. Survey required by the provisions of this paragraph must comply with the boundary survey measurement standards for a survey as published by the Delaware Society of Land Surveyors.~~

25. TITLE QUALITY:

The Preservation Easement conveyed to the Foundation shall be unencumbered except of standard exceptions and be capable of being insured as such by an established and recognized title insurance company doing business in the State of Delaware.

~~APPENDIX A: APPLICATION FOR A PRESERVATION DISTRICT~~

~~DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION~~
~~AGRICULTURAL PRESERVATION DISTRICT APPLICATION~~
~~RETURN TO:~~
~~Delaware Agricultural Lands Preservation Foundation~~
~~2320 S. duPont Highway, Dover, DE 19901~~
~~(302) 739-4811, (800) 282-8685 in DE only~~
~~PLEASE TYPE OR PRINT:~~
~~Name(s) of Petitioner(s)~~
~~(All Fee Simple Owners of Record)~~
~~Mailing Address: _____~~
~~Telephone Number: (H) _____ (W) _____~~
~~Location:~~
~~County _____ Community Name (Hundred) _____~~
~~Adjoining Roads _____~~
~~Deed References - Liber/Folio _____~~
~~County Tax Parcel Number(s) _____~~
~~Total Acreage of Farm: ____ Zoning Designation: _____~~
~~Type of Land Use:~~
~~Crop Land _____ acres Tidal Wetlands _____ acres~~
~~Aquaculture _____ acres Farm Structures _____ acres~~
~~Pasture Land _____ acres Residence/buildings _____ acres~~
~~Woodland _____ acres Other (specify) _____ acres~~

~~Metes & Bounds Description or Deed Reference (__ *Attached*)~~
~~Easements/Rights-of-Way (identify, if any):~~
~~Mortgages/Liens (identify, if any):~~
~~# of Dwelling Units: _____ Is a soil and water conservation plan in effect? __ yes __ no~~
~~Is any portion of the proposed District currently subject to subdivision? __ yes __ no~~
~~Will other parcels be included in this District? __ yes __ no~~
~~(If "yes", please send all applications to be included in this District together)~~

~~FILE NO. (for office use only): _____~~

APPENDIX A: APPLICATION FOR A PRESERVATION DISTRICT

DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION
AGRICULTURAL PRESERVATION DISTRICT APPLICATION

RETURN TO: Delaware Agricultural Lands Preservation FoundationFile# _____
2320 S. duPont Highway, Dover, DE 19901
(302) 739-4811, (800) 282-8685 in DE only

PLEASE TYPE OR PRINT:
Name(s) of Petitioner(s)
(All Fee Simple Owners of Record)
Mailing Address:
Telephone Number: (H) (W)
Farm Location (County):
Adjoining Roads
Attach an aerial photo of the farm, if you have one. # of Dwelling Units:

County Tax Parcel Number(s)

Total Acreage of Farm: Zoning Designation: (Call County Planning for zoning designation)
Type of Land Use:
Crop Land acres Tidal Wetlands acres
Aquaculture acres Farm Structures acres
Pasture Land acres Residence/buildings acres
Woodland acres Other (specify) acres
Type of Farm Operation:
Historic Significance of Farm (if any)

Easements/Rights-of-Way (identify, if any):
Is there a Federally approved soil and water conservation plan in effect Yes No
Is any portion of the proposed District currently subject to subdivision? Yes No
District Name You would Prefer

APPENDIX B: DISTRICT AGREEMENT:

Delaware Agricultural Lands Preservation Foundation
Agricultural Preservation District Agreement

This Agricultural Preservation District Agreement, in the nature of a declaration of a Restriction on the Use of Land for the purpose of preserving productive agricultural land, is made this ____ day of _____, 19 ___ by and between _____ , their heirs,ccessors and assigns (hereafter "GRANTORS"), of the County of _____, Delaware, and the DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION, its successor, nominee or assign, a body politic and corporate constituting a public instrumentality of the State, created and organized under the laws of the State of Delaware, with its offices at 2320 S. DuPont Highway, Dover, Delaware 19901 (hereinafter "GRANTEE").

WHEREAS, GRANTORS are the owners in fee of lands (Property) subject to
agricultural use as shown on Exhibit "A" which Grantors desire to be included in an Agricultural Preservation District such Property being located in _____ County, Delaware, more fully described in whole or in part in a deed recorded in the Office of the Recorder of Deeds in and for _____County, Delaware in Deed Book _____, Page _____, _____ County Parcel Nos. _____. The Property consists of _____ acres on which _____ acre(s) are devoted to dwelling housing; and

WHEREAS, in consideration of those benefits conferred under 3 Del. C. §910 and §911 GRANTORS voluntarily enter into this Agreement;

WHEREAS, public open space benefits result from the protection and conservation of farmland including the protection of scenic areas for public visual enjoyment from public rights-of-way; that the conservation and protection of agricultural lands as valued natural and ecological resources provide needed open spaces for clean air as well as for aesthetic purposes; and that public benefit will result from the conservation, protection, development and improvement of agricultural lands for the production of food and other agricultural products; and

WHEREAS, GRANTEE has declared that the preservation of prime agricultural land is vital to the public interest of the State, the region, and the nation through its economic, environmental, cultural and productive benefits; and

WHEREAS, GRANTORS desire and intend that the agricultural and open space character of the Property be preserved, protected, and maintained; and

WHEREAS, GRANTEE is entitled to enforce this Agricultural Preservation District Agreement and to preserve and protect for ten years from the effective date of this Agreement, or any extension period, the Property subject to the restrictions imposed under this Agreement;

NOW, THEREFORE, in consideration of the foregoing and as required by 3 Del. C. §908(a)(4), the undersigned GRANTORS agree to the following restrictions which shall apply to the Property of GRANTORS as shown on Exhibit "A" and/or referenced in whole or in part in Deed Book _____ , Page_____ , _____County Parcel Nos._____ as recorded in the Office of the Recorder of Deeds in and for _____ County:

1. No rezoning or major subdivision of the Property, or any portion thereof, shall be allowed.

2. Activities conducted on the Property shall be limited to agricultural and related uses.

3. The residential use of the Property shall be limited to dwelling housing for the Owner, relatives of the Owner, and persons providing permanent or seasonal farm labor services. The dwelling housing allowed hereunder shall be further limited to usage of no more than one (1) acre of land for each twenty (20) acres of usable land on the Property, with a maximum of ten (10) acres of land being used for dwelling housing on the Property. The Property consists of _____acres, of which _____ acres are usable for agricultural and related uses. There (is) (are) currently _____ acre(s) used for dwelling housing on the Property, and only _____additional acre(s) for

dwelling housing shall be allowed.

4. For purposes of this Agreement the term "agricultural and related uses" shall mean all forms of farming, including agriculture, horticulture, aquaculture, silviculture, and activities devoted to the production for sale of food and other products useful to man which are grown, raised or harvested on lands and waters. The term "agricultural and related uses" does not include, among other things, such activities as:

(a) excavation, filling, borrow pits, extraction, processing and removal of sand, gravel, loam, rock or other minerals, unless such activities are currently required by or ancillary to any preparation for, or operation of any activities involving aquaculture, farm ponds, cranberry operations, manure handling facilities, and other activities directly related to agricultural production.

(b) acts, actions and neglect which are detrimental to drainage, flood control, water conservation, erosion control or soil conservation.

(c) acts, actions and neglect that negatively affect the continued agricultural use of the land.

uses that are not directly and functionally related to the farming activities conducted on the Property.

The allowability of a general use, conditional use, special use or other use under any zoning law or ordinance shall not have any effect on the restrictions imposed on the Property under this Agreement.

~~5.~~ 6.This Agreement shall become effective as of the date the necessary approvals have been rendered and the Secretary of Agriculture has either failed to exercise or waived the right of rejection allowed within the thirty (30) day period following Foundation action on the District Application. At the time of recording of the Agreement the Foundation shall certify the date of creation of the District or extension thereto, and such date shall serve as the effective date of this Agreement.

~~6.~~ 7.This Agreement shall remain in effect for a minimum period of ten (10) years from the effective date. Unless GRANTOR(s) provide written notification to the Foundation of intent to withdraw the Property from the District at least six (6) months prior to expiration date of this Agreement or any extension thereto, this Agreement shall continue for additional five (5) year periods.

~~7.~~ 8.This Agreement shall be considered a covenant which runs with and binds the Property and the terms and conditions shall be subject to specific performance, and other action allowed under 3 Del. C. §920. GRANTOR(s) agree to abide by the provisions of 3 Del. C. Chapter 9 and the duly adopted regulations thereunder as such provisions relate to the Property.

~~8.~~ 9.By executing this Agreement the GRANTOR(s) verify that individually or collectively GRANTOR(s) hold a fee simple interest in the Property and (is) (are) entitled to enter into this Agreement. GRANTOR(s) further verify that the information contained in the District Application is true and correct.

~~9.~~ 10.The Agreement shall be binding on the heirs, successors and assigns of GRANTOR(s). In the event of transfer of any interest in the Property during the term of this Agreement GRANTOR(s) shall provide advance written notification of this Agreement and the restrictions contained herein to the party acquiring such interest and a copy of such written notification shall be provided to the Foundation.

IN WITNESS WHEREOF, the (party) (parties) have set (his) (her) (their) hands
and seals this _____ day of _____, 19 ___.

WITNESS:

_____

_____(S)
Grantor

_____

_____(S)

Grantor

STATE OF DELAWARE)
) SS.:
COUNTY OF _____)

ON THIS, the _____ day of _____, 19 ___, before me, the undersigned Notary Public, personally appeared _____, known to me (or satisfactorily proven) to be the person or persons whose names are subscribed to the within instrument and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and notarial seal._____
Notary Public
My Commission Expires: _____

I, THE UNDERSIGNED, being the Chairman of the Delaware Agricultural Lands Preservation Foundation or authorized assignee of the Delaware Agricultural Lands Preservation Foundation, hereby execute this Agricultural Preservation District Agreement on behalf of the Foundation, and certify that the District or extension of existing District has been established as of _____ , 19 ____.

IN WITNESS WHEREOF, I have set my hand and seal this _____ day of _____, 19 ___.

WITNESS:

_____(S)
Chairman, Delaware Agricultural Lands Preservation Foundation or Authorized Designee

STATE OF DELAWARE)
) SS.:
COUNTY OF _____)

ON THIS, the _____ day of _____, 19 ___, before me, the undersigned Notary Public, personally appeared _____, known to me (or satisfactorily proven) to be the person or persons whose names are subscribed to the within instrument and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and notarial seal.

_____
Notary Public
My Commission Expires: _____

CERTIFICATION:

The Property subject to this District Agreement was accepted into an Agricultural Preservation District on _____ which is the effective date of this District Agreement.

~~APPENDIX C: CRITERIA CHECKLIST/STAFF REPORT~~

~~Place an "A", "B", or "C" in the space to the left of each criteria. "A" means that the proposed District rates high for that criteria, in your opinion. "C" means that the proposed District rates low for that criteria, in your opinion.~~

~~TOTAL LESA SCORE:~~

~~LE SA~~

~~(300 points maximum) 100 pts.) (200 pts.)~~

~~STRATEGY MAP LEVEL: =~~

~~PRIORITY~~

~~LIKELIHOOD OF CONVERSION TO NON-AG USE:~~

~~AG DISTRICT EXPANSION POTENTIAL:~~

~~DISTRICT SIZE: acres TOTAL AREA OF APPLICANT'S~~

~~% IN AG USE: PROPERTY: acres~~

~~GROSS FARM SALES: average in past two years~~

~~AESTHETIC VALUE: adjacent to open space historic significance ecological significance~~

~~CURRENT ZONING DESIGNATION & SUBDIVISION STATUS:~~

~~CONSISTENCY WITH COUNTY COMPREHENSIVE PLAN STAFF RECOMMENDATION:~~

~~The criteria checklist & staff report is designed to give Foundation Trustees, the County Farmland Preservation Advisory Boards and the County Planning & Zoning authorities a concise method of reviewing and prioritizing applications for Agricultural Preservation Districts. All of the criteria for application evaluation are referenced under 3 Del. C., §908, but only some of them are requirements for minimum program eligibility. The report includes information that should prove helpful in approving or rejecting an application.~~

~~Voting members of each body will rate each criteria with an "A", "B" or "C", with "C" being the lowest rating and "A" being the highest. When all forms have been completed the voting body should discuss the results and approve or reject the application by a majority vote. An application receiving an "A" or "B" on a majority of the criteria is likely to be approved by the voting body. Please note that this is not a scoring mechanism where an application needs a certain number of points to be approved. It is simply a tool to help analyze and evaluate the significant factors of each application. However, criteria should be rated very carefully because they may be instrumental in prioritizing properties for the purchase of development rights.~~

~~TOTAL LESA SCORE:~~

~~An application must have a minimum Land Evaluation and Site Assessment (LESA) score of 170 points out of a possible 300. The higher the LESA score, the more suitable the property is for long-term agricultural production.~~

~~STRATEGY MAP LEVEL:~~

~~There are five levels for this criteria ranging from high priority to low priority. The higher the priority, the more likely the property should be placed in an Agricultural Preservation District.~~

~~LIKELIHOOD OF CONVERSION TO NON-AG USE:~~

~~This criteria examines the level of urgency for preserving the property, and the chances of its development if it is not accepted into the program. If the probability of future development is very high, then the preservation of the property will dictate future urban growth boundaries.~~

~~AG DISTRICT EXPANSION POTENTIAL:~~

~~This criteria examines the future prospect for increasing the size of protected farming areas. Emphasis will be on location and surrounding properties.~~

~~DISTRICT SIZE:~~

~~An Agricultural Preservation District must be at~~

~~least 200 contiguous acres.~~

~~PERCENTAGE OF PROPERTY IN AG USE:~~

~~Determines how much of the property is utilized for crops, livestock, or forest management. This becomes increasingly important when considering the potential purchase of a Preservation Easement.~~

~~GROSS FARM SALES:~~

~~This criteria examines the total output (gross sales) of agricultural products from the property, owned or rented in a proposed District. This factor is reviewed because it is important to recognize farms that exceed the Farmland Assessment requirements and farmers who have incentive to maintain their operations in the long-term. For Farmland Assessment, a farm needs only to have an average of $10,000 gross sales per year for the past two years or show potential for this average for the next two years, if the farm is less than 10 acres. Due to the long-term nature of sales in forestry, special consideration will be given to parcels showing potential income from forestry sales.~~

~~AESTHETIC VALUE:~~

~~This criteria examines extra benefits to be realized if the application is approved. Emphasis will be placed on the preservation of certain rural characteristics such as adjacent open space (State Parks or Forests), historical areas (Century Farm) and natural heritage areas.~~

~~CURRENT ZONING DESIGNATION & SUBDIVISION STATUS:~~

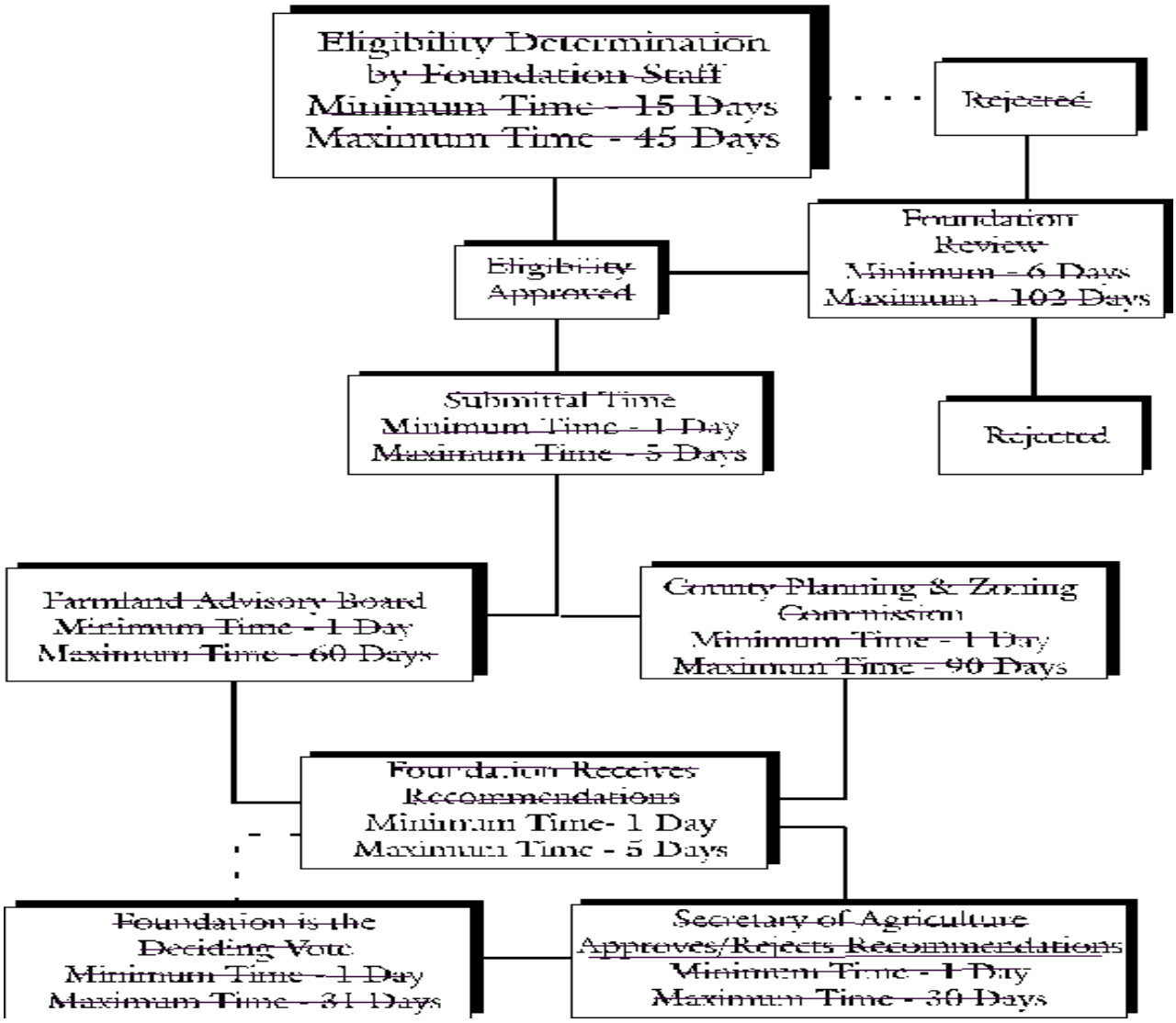
~~This factor must be reviewed because parcels often have more than one zoning designation, or have subdivision plans.~~

~~CONSISTENCY WITH THE COUNTY COMPREHENSIVE PLAN:~~

~~This criteria is needed to ensure that the proposed District is not located in an area planned for future development.~~

~~STAFF RECOMMENDATION:~~

~~A database will be used to track all criteria and summarize how the application~~ ~~compares overall to other applications or established Districts. The staff will make a recommendation based on the results of the above criteria, site visits and interviews.~~



~~APPENDIX D: TIME-LINE TO ESTABLISH A DISTRICT~~

~~A complete application package shall includes: *~~

~~1. A complete application form.~~

~~2. All available deeds, surveys, or maps which describe the property. Recent transfers of property may not be on file.~~

~~3. An Agricultural Preservation District map showing the boundaries of the land proposed for easement sale if the amount of land proposed for easement sale is less than the amount of land owned within the District.~~

~~4. A recent appraisal if available (Note: The Foundation does not initally require a landowner's appraisal but will include it in an appraisal review).~~

~~5Most recent assessment notice.~~

~~Submit the application package to:~~
~~The Delaware Agricultural Lands Preservation Foundation~~
~~2320 S. DuPont Highway, Dover, Delaware 19901~~

~~* The foundation will not process an incomplete application.~~

APPENDIX D: ~~TIME LINE TO ESTABLISH A DISTRICT~~

DELAWARE AGRICULTURAL LANDS
PRESERVATION FOUNDATION AGRICULTURAL
PRESERVATION EASEMENT APPLICATION

Please Type or Print

I/We _____owner(s), of agricultural land, which has been established by recorded agreement as an Agricultural Preservation District in _____ County, Delaware, apply to the Delaware Agricultural Lands Preservation Foundation to sell an Agricultural Preservation

Easement. Agricultural Preservation Easement sale to the Delaware Agricultural Lands Preservation Foundation is offered in consideration of not less than

1) $_____ for the entire farm; or 2) $_____ per acre; or 3) an amount to be determined by appraisal and acceptable to buyer and seller ____ (please check).

The land proposed for easement sale equals _____ acres and consists of (check one):

___the entire property owned as identified and stated in the District Agreement.

___the property as outlined on the Agricultural Preservation District map attached (highlight the land proposed for an Agricultural Preservation Easement).

Tax Parcel Number(s):_____
Deed Reference(s):_____
Street/Road Location:_____
Mortgages or Leins on the Property:_____
Easements/Right-of-Way (identify, if any):
# of Dwelling Units:_____ Date of Soil & Water Conservation Plan, if any:_____
Applicant(s): Corporate or Business Name: _____

Federal I.D. Number (if applicant is a corporation or business) _____
Name:_____
Address:_____
Telephone Number: (H)_____
(W)_____

****
FOR OFFICE USE ONLY

File #:_____ District Name: _____ Date Received:_____

LAND TYPE AND USE
Tillable Cropland:____ acres Aquaculture ____ acres
Pasture:____ acresFarm Structures:____ acres
Woodland____ acresResidence/Buildings:____ acres
Orchard/Vineyard/Nursery: ____ acresOther (Specify): acres

List Crops Grown on Land Proposed for Easement Sale for the Highest Three Crop Production Years Out of the Last Five Crop Years:

CROP	**ACRES GROWN**	**YIELD PER ACRE**
Year ___		
1.		
2.		
3.		
4.		
5.		
Year ___		
1.		
2.		
3.		
4.		
5.		
Year ___		
1.		
2.		
3.		
4.		
5.		

LIVESTOCK PRODUCTION (MOST RECENT YEAR)

Average Livestock	Product Numbers	Amount Sold	Sold
1.			
2.			
3.			
4.			

Gross Income From Sales During the Three Crop Years Listed (past three years for livestock production):

Year ___ = $_____, Year ___ = $_____, Year ___ = $_____

AGRICULTURAL ASSETS

List and briefly describe major assets and investments related to agricultural production such as buildings, packing equipment, dairy equipment, irrigation/water supply, machinery, etc. Use additional paper if necessary.

Asset	Approximate Dimensions or Capacity
_____	_____
_____	_____
_____	
_____	
_____	
_____	

If farm is not owner-occupied or owner-operated, list name(s) and telephone number(s) of tenant and/or farm operator (farm operator should assist and supply information to applicant as needed).

Tenant:_____ Farm operator:
The name, address and phone number of person to be contacted to view farm if different from landowner(s):
_____
_____

1. MINERAL RIGHTS: Does a party or parties other than

yourself own or lease mineral rights on this property? Yes___ No___ If yes, secure signatures and addresses of such parties:

~~2. MORTGAGES OR LIENS: Is there a mortgage or other lien on this property? Yes___ No___ If yes, secure signatures and addresses of such holders:~~

~~I/We hereby agree to subordinate my/our interest in this property to the Delaware Agricultural Lands Preservation Foundation.~~

~~Name or Individual or Company Name of Individual or Company~~

~~Street AddressStreet Address~~

~~City, State & Zip CodeCity, State & Zip Code~~

~~Signature of Individual or Signature of Individual or Company RepresentativeCompany Representative~~

~~Date~~ ~~Date~~

I/We submit this application, true and complete, to convey an Agricultural Preservation Easement to the Delaware Agricultural Lands Preservation Foundation, and declare that good title is provided to the premises, free of encumbrances such as liens, mortgages, options, rights of others in extraction or mineral rights, land use restrictions, adverse ownership interests, and other encumbrances which would adversely impact the State of Delaware's interest in the farmland tract. I/We understand that any false information may be cause for rejection of application.

Landowner SignatureSocial Security # Date

Landowner SignatureSocial Security #Date

Landowner SignatureSocial Security #Date

Landowner SignatureSocial Security #Date

Landowner SignatureSocial Security #Date

Landowner SignatureSocial Security #Date

APPENDIX ~~F~~ E: TYPES OF FARM OPERATIONS BY VALUE/INTENSITY & INVESTMENT

FARM OPERATION VALUE/INTENSITY (EXAMPLES)	INVESTMENT		
	HIGH	MEDIUM	LOW
High Mushrooms Greenhouse Aquaculture (enclosed) Layer (enclosed) Vineyards Dairy	Modern production facilities. Most capital investments are less than 10 years old. Outstanding maintenance & appearance. Machinery up to date & maintained. Soil & Water Conservation Plan implemented.	Good production facilities. Capital investment less than 10 years old & better than average maintenance and appearance. Machinery maintained. Soil & Water Conservation Plan exists.	Adequate to poor production facility. Capital investments over 10 years old, poor appearance and machinery not well maintained. No Soil and Water Conservation Plan.
Medium-High Poultry (enclosed) Livestock (enclosed) Nursery stock Fruit Vegetables Turf	SAME AS ABOVE	SAME AS ABOVE	SAME AS ABOVE
Medium Row Crops Hay Livestock (grass) Tree Farm (planted)	Same as above, plus the following: Grain drying & storage available. Firebreaks to specification & well maintained. Proof of implementation of a Forest Management Plan.	Same as above, plus the following: Grain storage available. Adequate firebreaks. Forest Management Plan exists.	Same as above, plus the following: No storage available. Inadequate firebreak. No Forest Management Plan exists.
Low Forestry Non-crop rotation	Firebreaks to specification and well maintained. Proof of implementation of a Forest Management Plan.	Adequate Firebreaks. Forest Management Plan exists.	Inadequate firebreak. No Forest Management Plan exists.

APPENDIX ~~G~~ F:AGRICULTURAL LAND PRESERVATION EASEMENT

STATE OF DELAWARE
AGRICULTURAL LANDS PRESERVATION PROGRAM

THIS PRESERVATION EASEMENT, made, granted, assigned and conveyed this _____ day of _____, 19____, by _____, whose address is_____, and who is hereinafter referred to as "Grantor", AND the DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION, a body politic and corporate constituting a public instrumentality of the State of Delaware, and which is herein after referred to as "Grantee" and/or "Foundation".

WHEREAS, Grantor is fee simple title holder of certain lands situated in_____ _____ Hundred, _____ County, Delaware, being of record in Deed Record Book _____, at the Office of the Recorder of Deeds in and for _____ County, at _____, Delaware, hereinafter referred to as the "Parcel" and more particularly described in ~~Schedule A~~ Exhibit "A" (annexed hereto); and as shown on plot entitled "Delaware Agricultural Lands Preservation Foundation -

Preservation Easement Area - _____" as prepared by _____, dated _____ and recorded in the aforesaid Office of the Recorder of Deeds in Plot Book _____, Page _____.

WHEREAS, the General Assembly of the State of Delaware has declared that the preservation of the State's farmlands and forestlands is considered essential to maintaining agriculture as a viable industry and as an important contributor to Delaware's economy; and

WHEREAS, the General Assembly of the State of Delaware has recognized that a need exists to create sufficient economic incentives and benefits to encourage agricultural landowners to voluntarily place viable agricultural lands under protective restrictions through the creation of and participation in agricultural preservation districts and sale and/or donation of development rights; and

WHEREAS, the Grantor desires to grant and convey to the Foundation an agricultural lands preservation easement as provided in Chapter 9, Title 3 of the Delaware Code Annotated. ~~for the consideration of the sum of One Dollar ($1.00), receipt of which is hereby acknowledged, and in consideration of the benefits conferred under 3 Del. C. §§910 and 911;~~

NOW, THEREFORE, the Grantor, for and in consideration of the sum of _____, the receipt and sufficiency of which are hereby acknowledged, and in consideration of the benefits conferred under 3 Del.C. Ch. 9, hereby grants and conveys to the Foundation, its successors and assigns, an agricultural lands preservation easement on and over the Parcel, and convenants and promises that the Parcel ~~Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns grants and conveys to the Foundation an agricultural lands preservation easement on the Parcel, and promises that the parcel~~ will be owned, used and conveyed subject to, and not in violation of the following restrictions:

1.No rezoning or major subdivision of the real property shall be allowed.

2.Activities conducted on the real property shall be limited to agricultural and related uses as defined in 3 Del. C. §902. "Agricultural and related uses" does not include, among other things, such activities as:

(a)excavation, filling, borrow pits, extraction, processing and removal of sand, gravel, loam, rock or other minerals, unless such activities are currently required by or ancillary to any preparation for, or operation of any activities involving aquaculture, farm ponds, cranberry operations, manure handling facilities, and other activities directly related to agricultural production on the Parcel;

(b)acts, actions and neglect which are detrimental to drainage, flood control, water conservation, erosion control or soil conservation; and

(c) acts, actions and neglect that negatively affect the continued agricultural use of the land.

(d) uses that are not directly and functionally related to the farming activities conducted on the Parcel.

3.~~Residential use of the real property shall be limited to dwelling housing for the owner, relatives of the owner and persons providing permanent and seasonal farm labor services, provided, however, that any such dwelling housing shall be limited to usage of no more than 1 acre of land for each 20 acres of usable land owned in the Agricultural Preservation District, with a maximum of 10 acres of land being allowed for dwelling housing on an owner's land within a District.~~

The allowability of a general use, conditional use, special use or other use under any zoning law or ordinance shall not have any effect on the restrictions imposed on the Parcel under this easement.

~~3.~~4. Residential use of the real property shall be limited to dwelling housing for the owner, relatives of the owner and persons providing permanent ~~and~~ or seasonal farm labor services, provided, however, that any such dwelling housing shall be limited to usage of no more than 1 acre of land for each 20 acres of usable land owned in the Agricultural Preservation District, with a maximum of 10 acres of land being allowed for dwelling housing on an owner's land within a District.

~~4~~. 5.This easement shall be deemed a covenant which runs with and binds the parcel permanently as set forth in 3 del. c. §909(c), the terms and conditions shall be subject to specific performance and other action allowed under 3 Del. C. §920, and shall be subject to release only under 3 Del. C. §917. This easement shall be binding upon the heirs, executors, administrators, successors and assigns of the Grantor.

~~5~~. 6.The provisions of Title 3, Chapter 9 of the Delaware Code Annotated and duly adopted regulations hereunder as such provisions relate to the Parcel shall govern this easement.

IN WITNESS WHEREOF, the said _____, ~~hath caused his name to be~~ have hereunto set their hands and seals this _____ day of _____, A.D., _____.
~~hereunto affixed this _____ day of _____, 19____.~~

Signed and Delivered
in the Presence of:

_____(SEAL)
~~Grantor~~

_____(SEAL)

STATE OF DELAWARE)
) SS.:
COUNTY OF _____)

BE IT REMEMBERED that on this _____ day of _____, A.D. 19 _____, personally came before me, the Subscriber, a Notary Public for the State and County aforesaid, _____, ~~party~~ parties to this Indenture, known to me personally to be such, and ~~he~~ they acknowledged this Indenture to be ~~his~~ their act and deed.

GIVEN under my Hand and Seal of office the day and year aforesaid.

_____
NOTARY PUBLIC SIGNATURE~~Notary Public~~

_____
NOTARY NAME - TYPED OR PRINTED
My Commission Expires:
_____

~~SCHEDULE A~~
~~(PROPERTY DESCRIPTION)~~

APPENDIX: ~~H~~ G STRATEGY MAP NUMERICAL FORMULA

The Agricultural Lands Strategy Map represents a modified Land Evaluation and Site Assessment (LESA) System utilized by the Department of Agriculture. The modified system includes factors used in the original LESA but are altered to suit an area-wide analysis as opposed to a site-specific analysis.

LAYER		SOURCE
Soils (weight = 9)		SCS Natural Soils Groups
A=9	= prime	
B=6	= statewide importance	
C=3	= marginal	
D=0	= other (not important)	
Sewer (weight = 8)		County Engineering
A=9	= no sewer ~~within 1/4 mile of area~~	
B=6	= proposed/planned sewer ~~within 1/4 mile of area (proposed meaning $ committed in the capital budget)~~	
C=0	= area has sewer ~~within 1/4 mile of area~~	
Land Use/Land Cover (weight = 5)		~~1984~~ 1992 Land Use/ Land Cover Map
A=9	= cropland	
B=7	= forest	
C=0	= other	
% of Area in Agriculture (weight = 4)		SCS Soil map grids were used. Then LU/LC cropland % within each map calculated by computer .
A=9	= high	
B=6	= medium	
C=3	= low	
D=0	=very low	
Agricultural Investment (weight = 4)		County ASCS Maps
A=9	= high	barns, storage facilities, grain elevators, feed mills, livestock shelters, poultry houses, slaughter facilities deep water wells, irrigation systems low milking & loafing facilities, equipment dealers, chemical & fertilizer suppliers, canneries & freezing processing facilities, tax ditches;
B=6	= medium	
C=3	= low	
D=0	= none	
Natural Areas (weight = 3)		DNREC Natural Areas Map
A=9	= high	Federal Lands - National Wildlife Refuge
B=6	= medium	Army Core of Engineers
C=3	= low	National Guard Lands
D=0	= none	State Lands - Foundation Easements State Parks, Fish & Wildlife Management Areas, State Forests, State Nature Preserves, State Ponds, Dept. of State (Museums/Cultural Resources) DNREC (donated) Local Lands - County Parks, Municipal Parks Private Lands:Conservation Organizations include: Delaware Wild Lands, Inc., Nature Conservancy Delaware Nature Society , preserved lands were given a 4:1 weight over "proposed" lands for protection and privately preserved lands.

Regimes:

The maximum possible scoring range in Delaware is 0 - 297each county may have a different range based on the land characteristics of each layer. For instance, if Kent County's top score was 280 and the lowest was 40, then the range would be from 40 - 280. An eight-regime model is used in each county meaning that Kent County may have 30 points in each regime. For each county;
regimes 1-4 = dk. yellow, 5 = lt. yellow, 6 = blue, 7 = lt. green, 8 = dk. green

Yellow areas are a lower priority for farmland preservation.
Blue areas are a medium priority
Green areas are a higher priority for farmland preservation, with dark green being the highest.

[~~**APPENDIX H ORDER**~~

~~**AND NOW, TO WIT: This day of , A.D. 1999, the Delaware Agricultural Lands Preservation Foundation having held public hearings and satisfied the requirements of 3 Del. C. §904(a) and (3), and having duly considered the Hearing Examiner's Report with regard to the proposed Revisions to Guidelines for the Purchase of Agricultural Lands Preservation Easements, proposed Priority Preservation Area Map, and proposed revisions to the Strategy Maps, and having acted unanimously in favor thereon at a duly noticed public meeting.**~~

~~**IT IS HEREBY ORDERED that the revised Guidelines for the Purchase of Agricultural Lands Preservation Easements, the Proposed Priority Preservation Area Map, and the mathematical formula for the revised Strategy Map are hereby adopted and shall be in full force and effect as of , 1999.**~~

~~**IT IS SO ORDERED.**~~
~~**Dr. Donald F. Crossan, Chairperson**~~
~~**Robert F. Garey, Vice Chairperson Kent County**~~

~~Representative~~
~~Jane T. Mitchell, Secretary Grange Representative~~
~~Dennis H. Clay, Treasurer New Castle County Representative~~
~~John F. Tarburton Secretary of Agriculture~~
~~Mary McKenzie Acting Secretary of the Dept. of Natural Resources & Environmental Control~~
~~Jack Markell State Treasurer~~
~~Alden Hopkins Farm Bureau Representative]~~

DEPARTMENT OF HEALTH AND SOCIAL SERVICES

DIVISION OF PUBLIC HEALTH

OFFICE OF DRINKING WATER

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

IN THE MATTER OF: |
|
REVISION OF STATE OF DELAWARE |
REGULATIONS GOVERNING PUBLIC |
DRINKING WATER SYSTEMS |

NATURE OF THE PROCEEDINGS:

Delaware Health & Social Services ("DHSS") initiated proceedings to amend existing Regulations Governing Public Drinking Water Systems. The DHSS's proceedings to amend its regulations were initiated pursuant to 29 Delaware Code §10114 and its authority as prescribed by 16 Delaware Code §122 (3) (c).

On May 1, 1999, the DHSS published in the Delaware Register of Regulations Volume 2 Issue 7 (page 1095) its notice of proposed regulation changes, pursuant to 29 Delaware Code §10115. It requested that written materials and suggestions from the public concerning the proposed regulations be delivered to DHSS by May 31, 1999, or be presented at public hearings on May 27, 1999 at which time the Department would review information, factual evidence and public comment to the said proposed changes to the regulations.

Oral and written comments were received and evaluated. The results of that evaluation are summarized in the accompanying "Hearing Officers Report."

FINDINGS OF FACT

The Department finds that the proposed changes, as set forth in the attached copy, should be made in the best interest of the general public of the State of Delaware.

THEREFORE, IT IS ORDERED, that the proposed Regulations Governing Public Drinking Water Systems are adopted and shall become effective August 11, 1999, after publication of the final regulation in the Delaware Register.

June 28, 1999
Gregg C. Sylvester, MD
Secretary

Public Hearing to Discuss Proposed Revision to
The State of Delaware Regulations Governing
Public Drinking Water Systems

REPORT

A public hearing was held on May 27, 1999, at 2:20 PM in the Jesse Cooper Building, Dover, DE, before the undersigned Hearing Officer to discuss the proposed "State of Delaware Regulations Governing Public Drinking Water Systems." Donna Stulir, Environmental Health Specialist, Office of Drinking Water, represented the Division of Public Health. Ed Hallock, Office of Drinking Water Program Manager, and Mike Joyce, Health Systems Protection Environmental Engineer, were present to answer questions. The announcement regarding the hearing was advertised in the Delaware State News, the News Journal and the Delaware Register of Regulations in accordance with Delaware Law. Additionally, flyers were sent to interested parties. Verifying documents are attached to the record. These regulations have been approved by the Delaware Attorney General's Office.

STATE PRESENTATION

Ms. Stulir presented the State's presentation as follows:

Hearing Exhibits:

Exhibit 1.Affidavit from publication in the News Journal dated April 27, 1999.

Exhibit 2.Affidavit from publication in the Delaware State News, dated April 28, 1999.

Exhibit 3.Copy of flyer to interested parties and the drinking water industry.

Exhibit 4.Copy of proposed changes published in the May issue of Delaware Register of Regulations.

Exhibit 5.Deputy Attorney General's statement of approval of the regulations.

PUBLIC QUESTIONS

Attendees were allowed and encouraged to discuss and ask questions regarding all sections of the regulations in order that they fully understood the intent of the various regulatory sections. All questions were answered to the satisfaction of each questioner. Three questions were asked:

Question 1.Mark Downes, Cabe Associates, had a

question in reference to Section 22.211 A. Will there be discretion with regard to compliance with standards? (Many 10 states standards which have recommendations rather than requirements.)

Mike Joyce commented that they will use discretion.

Question 2.In reference to the establishment of the new water systems – how will this affect working with DNREC and the PSC?

Ed Hallock answered that the Division will coordinate their reviews with the other agencies.

Question 3.Phyllis McKinley, First State Manufactured Housing, asked what is the Certificate of Approval to Operate and does it already exist?

Mike Joyce explained the difference between the Certificate of Approval and the Certificate to Operate. We currently do not issue Certificates of Approval to operate, but will in the future.

PUBLIC COMMENT

One comments was received during the presentation. Mark Downs, Cabe Associates, commented that he supports the regulations. The comment period was held open until the end of business on May 31, 1999. No written comments were received after the comment period. There was no opposition to the regulations.

RECOMMENDATIONS

This hearing was held in accordance with those requirements in 29 DE Code. It is this Hearing Officer's opinion that the regulations are acceptable to move to the adoption process.

June 7, 1999
John J. Beaman, Hearing Officer

Summary of regulatory changes to the "State of Delaware Regulations Governing Public Drinking Water Systems" in order to incorporate new capacity development requirements of the Safe Drinking Water Act

The Delaware Health & Social Services has made changes to the "State of Delaware Regulations Governing Public Drinking Water Systems." Following are the changes:

A new section is added to incorporate the definition for capacity. §22.106: Capacity, defines capacity and provides definitions of the principle elements of technical, managerial, and financial capacity as they apply to public water systems

Section 22.211: Plans and Specifications, has been modified to incorporate the new capacity development requirements and update the plan review requirements by establishing national standards to be used when submitting plans. §22.211 A (1), establishes Ten States Standards, National Sanitation Foundation or approved equivalent as engineering standards for construction of new or alterations to existing public water systems. §22.211 B establishes the requirement that new public water systems, those beginning operation after October 1, 1999, must submit an application for capacity development review. This section also adds the requirement that new water systems must use a professional engineer to prepare plans and specifications.

Section 22.212: Approval of Water Supplies, has been moved from §22.303 and renumbered §22.212. This section retains all of the requirements from §22.303 and adds a new Certificate of Approval to Operate requirement that is dependent upon the capacity development review. §22.212 A, remains the same as the previous §22.303. §22.212 B, requires that all new community and non-transient non-community public water systems commencing operation after October 1, 1999 demonstrate technical, managerial, and financial capacity to operate in compliance with the "State of Delaware Regulations Governing Public Drinking Water Systems."

STATE OF DELAWARE
REGULATIONS GOVERNING
PUBLIC DRINKING WATER SYSTEMS

*** Due to space limitations the table of contents is not being reprinted. The table of contents is available from the Department of Health and Social Services.**

SECTION 22.1 DEFINITIONS

22.101"Action Level" means the concentration of lead or copper in water specified in Section 22.607A1a & b which determines, in some cases, the treatment requirements contained in Section 22.607 that a water system is required to complete.

22.102 "Alpha Particle" means a particle identical with a helium nucleus, emitted from the nucleus of a radioactive element.

22.103 "Approved" means approved by the Division.

22.104 "Best Available Technology (BAT)" means the best technology, treatment techniques, or other means which the Division finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purposes of setting maximum contaminant levels for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon.

22.105 "Beta Particle" means a particle identical with an electron, emitted from the nucleus of a radioactive element.

22.106**["Capacity" means the overall capability of a**

water system to reliably produce and deliver water meeting all national primary drinking water regulations. Capacity encompasses the technical, managerial, and financial capabilities that will enable a water system to plan for, achieve, and maintain compliance with applicable drinking water standards.

Technical Capacity refers to the physical infrastructure of the water system, including but not limited to, the adequacy of the source water, infrastructure (source, treatment, storage, and distribution), and the ability of system personnel to implement the requisite technical knowledge.

Managerial Capacity refers to the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages.

Financial Capacity refers to the financial resources of the water system, including but not limited to revenue sufficiency and fiscal controls.]

[~~22.106~~7] "Coagulation" means a process using coagulant chemicals and mixing by which colloidal and suspended materials are de-stabilized and agglomerated into flocs.

22.10**[~~7~~8]** "Coliform Group" means all organisms considered in the coliform group as set forth in the current edition of Standard Methods for the Examination of Water and Waste Water prepared and published jointly by the American Public Health Association, American Water Works Association and Water Pollution Control Federation.

22.10**[~~8~~9]** "Compliance Cycle" means the nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010, the third begins January 1, 2011 and ends December 31, 2019.

22.10**[~~9~~10]** "Compliance Period" means a three-year calendar year period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998, and the third from January 1, 1999 to December 31, 2001.

22.1**[~~10~~11]** "Confluent Growth" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.

22.1**[~~11~~12]** "Consecutive Water Supply" means a public water system that obtains all of its water from, but is not owned or operated by, a public water system to which such Regulations apply and alters the purchased water by some type of treatment, resells the purchased water to its customer, or furnishes water to an interstate carrier. The Division may opt to accept a consecutive supply as a single system for monitoring purposes.

22.1**[~~12~~13]** "Contaminant" means any physical, chemical, biological or radiological substance or matter in water.

22.1**[~~13~~14]** "Conventional Filtration Treatment" means a series of processes including coagulation, flocculation, sedimentation and filtration resulting in substantial particulate removal.

22.1**[~~14~~15]** "Corrosion Inhibitor" means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

22.1**[~~15~~16]** "CT or CTcalc" means the product of the residual disinfectant concentration (C) (22.161) in milligrams per liter (mg/L) determined before or at the first customer, and the corresponding disinfectant contact time (T) (22.120) in minutes, i.e. "C" X "T". If a public water system applies disinfectants at more than one (1) point prior to the first customer, it must determine the CT of each disinfectant sequence before or at the first customer to determine the total percent inactivation or total inactivation ratio. In determining the total inactivation ratio, the public water system must determine the residual disinfectant concentration of each disinfection sequence and corresponding contact time before any subsequent disinfection application point(s). CT99.9 is the CT value required for 99.9 percent (3-log) inactivation of Giardia lamblia cysts. The inactivation ratio is the CTcalc divided by the CT99.9 and the total inactivation ratio is the sum of the inactivation ratios for each disinfection sequence. A total inactivation ratio equal to or greater than 1.0 is assumed to provide a 3-log inactivation of Giardia lamblia cysts.

22.1**[~~16~~17]** "Diatomaceous Earth Filtration" means a process resulting in substantial particulate removal in which a precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum), and while the water is filtered by passing through the cake on the septum, additional filter media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake.

22.1**[~~17~~18]** "Direct Filtration" means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

22.1**[~~18~~19]** "Direct Responsible Charge" means accountability for and performance of active, daily, on-site operational duties.

22.1**[~~19~~20]** "Disinfectant" means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogens (disease causing organisms).

22.1**[~~20~~21]** "Disinfectant Contact Time (T)" means the time in minutes that it takes for water to move from the point

of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration (C) is measured. Where only one (1) "C" is measured, "T" is the time in minutes that it takes for water to move from the point of disinfectant application to a point before or at where residual disinfectant concentration (C) is measured. Where more than one (1) "C" is measured, "T" is for the first measurement of "C", the time in minutes that it takes for water to move from the first or only point of disinfectant application to a point before or at the point where the first "C" is measured and for subsequent measurements of "C", the time in minutes that it takes for water to move from the previous "C" measurement point to the "C" measurement point for which the particular "T" is being calculated. Disinfectant contact time in pipelines must be calculated based on plug flow by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.

22.1**[~~21~~22]** "Disinfection" means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

22.1**[~~22~~23]** "Division" means the Division of Public Health of the Department of Health and Social Services established by Title 29, Section 7904 (a), Delaware Code.

22.1**[~~23~~24]** "Domestic or Other Non-Distribution System Plumbing Problem" means a coliform contamination problem in a public water system with more than one (1) service connection that is limited to the specific service connection from which the coliform positive sample was taken.

22.1**[~~24~~25]** "Dose Equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences and biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements.

22.1**[~~25~~26]** "Dwelling Unit" means one or more rooms arranged for the use of one or more individuals as a single housekeeping unit with cooking, living, sanitary and sleeping facilities.

22.1**[~~26~~27]** "Effective Corrosion Inhibitor Residual" means a concentration sufficient to form a passivating film on the interior walls of a pipe.

22.1**[~~27~~28]** "Emergency Situation" means a condition in which the specific provisions of these Regulations cannot be met for a temporary period and which necessitates immediate action because of the potential danger to public health.

22.1**[~~28~~29]** "Exemption" means an allowance to deviate from or to exceed a maximum contaminant level requirement or treatment technique requirement for a specific period of time (see Section 22.203). In order for a system to qualify for an exemption, the system must be in operation on the date of adoption of any maximum contaminant level or treatment technique requirement.

22.1**[~~29~~30]** "Filtration" means a process for removing particulate matter from water by passage through porous media.

22.1**[~~30~~31]** "First Draw Sample" means a one (1) liter sample of tap water, collected in accordance with Section 22.607G2b, that has been standing in plumbing pipes at least six (6) hours and is collected without flushing the tap.

22.1**[~~31~~32]** "Flocculation" means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

22.1**[~~32~~33]** "Gross Alpha Particle Activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

22.1**[~~33~~34]** "Gross Beta Particle Activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

22.1**[~~34~~35]** "Ground Water Under the Direct Influence of Surface Water" means any water beneath the surface of the ground with significant occurrence of insects or other microorganisms, algae, or large diameter pathogens such as Giardia lamblia, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the Division. The Division determination of direct influence may be based on site specific measurements of water quality and/or documentation of well construction characteristics and geology with field evaluation.

22.1**[~~35~~36]** "Halogen" means one of the chemical elements chlorine, bromine or iodine.

22.1**[~~36~~37]** "Health Hazard" means any condition, device or practice in the water supply system or its operation which creates, or may create, a danger to the health and well-being of the water consumer.

22.1**[~~37~~38]** "Initial Compliance Period" means the first full three-year compliance period which begins at least 18 months after promulgation, except for the following contaminants: Dichloromethane; 1,2,4-Trichlorobenzene; 1,1,2-Trichloroethane; Benzo[a]pyrene; Dalapon; Di(2-ethylhexyl adipate; Di(2-ethylhexyl) phthalate; Dinoseb; Diquat; Endothall; Endrin; Glyphosate; Hexachlorobenzene; Hexachlorocyclopentadiene; Oxamyl (Vydate); Picloram; Simazine; 2,3,7,8-TCDD (Dioxin); Antimony; Beryllium; Cyanide; Nickel; and Thallium, initial compliance period means the first full three-year compliance period after promulgation for systems with 150 or more service connections (January 1993 - December 1995) and first full three-year compliance period after the effective date of

regulation (January 1996 - December 1998) for systems having fewer than 150 service connections.

22.1**[~~38~~39]** "Large Water System" means a water system that serves more than 50,000 persons.

22.1**[~~39~~40]** "Lead Service Line" means a service line made of lead which connects the watermain to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.

22.1**[~~40~~41]**"Legionella" means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.

22.1**[~~41~~42]**"Man-Made Beta Particle and Photon Emitters" means all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69, except the daughter products of thorium 232, uranium 235 and uranium 238.

22.1**[~~42~~43]**"Maximum Contaminant Level (MCL)" means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

22.1**[~~43~~44]**"Maximum Total Trihalomethane Potential (MTP)" means the maximum concentrations of total trihalomethanes produced in a given water containing a disinfectant residual after seven days at a temperature of 25oC or above.

22.1**[~~44~~45]**"Medium Size Water System" means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

22.1**[~~45~~46]**"Minor Monitoring Violation" means the failure of a public water system to collect all required water samples or the failure to follow the prescribed sampling procedure within the prescribed time frame.

22.1**[~~46~~47]**"Near the First Service Connection" means at one (1) of the twenty (20) percent of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

22.1**[~~47~~48]**"Optimal Corrosion Control Treatment" means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.

22.1**[~~48~~49]** "Person" means any corporation, company, association, firm, municipally owned water utility, partnership, society and joint stock company, as well as any individual.

22.1**[~~49~~50]** "Picocurie (pCi)" means the quantity of radioactive material producing 2.22 nuclear transformations per minute.

22.1**[~~50~~51]** "Point of Disinfectant Application" means the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water runoff.

22.1**[~~51~~52]**"Point of Entry Treatment Device" means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

22.1**[~~52~~53]**"Point of Use Treatment Device" means a treatment device applied to a single tap used for the purpose of reducing contaminants in the drinking water at that one (1) tap.

22.1**[~~53~~54]**"Pollution" means the presence of anything in water which tends to degrade its quality so as to constitute a health hazard or impair the usefulness of the water.

22.1**[~~54~~55]**"Potable Water" means water which is in compliance with all of the required drinking water standards specified in these Regulations, and is acceptable for human consumption.

22.1**[~~55~~56]**"Primary Maximum Contaminant Level (PMCL)" means an MCL which involves a biological, chemical or physical characteristic of drinking water that may adversely affect the health of the consumer. This includes the MCLs for: coliform bacteria (includes total coliform and *E.coli*; antimony; arsenic; asbestos; barium; beryllium; cadmium; chromium; cyanide; fluoride; lead; mercury; nickel; nitrates; nitrites; total nitrate/nitrite selenium; thallium; turbidity; alachlor; aldicarb; aldicarb sulfone; aldicarb sulfoxide; atrazine; benzo (a) pyrene; carbofuran; chlordane; dalapon; di(2-ethylhexyl) adipate; di(2-ethylhexyl) phthalate; dibromochloropropane; dinoseb; diquat; 2,4-D; endothall; endrin; ethylenedibromide (EDB); glyphosate; heptachlor; heptachlor expoxide; hexachlorobenzene; hexachlorocyclopentadiene; lindane; methoxychlor; oxamyl (vydate); pentachlorophenol; picloram; polychlorinated biphenyls (PCBs); simazine; 2,3,7,8-TCDD (Dioxin); toxaphene; 2,4,5-TP silvex; total trihalomethanes; benzene; carbon tetrachloride; o-dichlorobenzene; p-dichlorobenzene; 1,2-dichloroethane, 1,1-dichloroetylene; cis-1,2-dichloroethylene; trans-1,2-dichloroethylene; dichloromethane; 1,2-dichlorpropane; ethylbenzene; monochlorobenzene; styrene; tetrachloroethylene; toluene; 1,2,4-trichlorobenzene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; vinyl choride; total xylenes and radioactivity (see Section 22.9).

22.1**[~~56~~57]** "Protection by Adequate Construction, Treatment and Supervision" means:

A. Works which are of adequate capacity to meet the maximum demands without creating health hazards and which are located, designed and constructed to eliminate or prevent pollution.

B. Any one or any combination of the controlled processes of coagulation, sedimentation, absorption, filtration, disinfection or other processes appropriate to the sources of supply, which produce a water consistently

meeting the requirements of these Regulations.

C. Conscientious operation of a public water supply by an individual in direct responsible charge who is acceptable to the Division, and meets the certification requirements of the Division at such time as these requirements are established.

22.1**[~~57~~58]** "Public Water System (PWS)" means a water supply system for the provision to the public of ~~piped~~ water for human consumption through pipes or other constructed conveyances either directly from the user's free flowing outlet or indirectly by the water being used to manufacture ice, foods and beverages or that supplies water for potable or domestic purposes for consumption in more than three dwelling units, or furnishes water for potable or domestic purposes to employees, tenants, members, guests or the public at large in commercial offices, industrial areas, multiple dwellings or semi-public buildings including, but without limitation, rooming and boarding houses, motels, tourist cabins, mobile home parks, restaurants, hospitals and other institutions, or offers any water for sale for potable domestic purposes. ~~For the purpose of this definition, consecutive water supplies which do not adversely affect the chemical, physical or bacteriological quality of the water are excluded. Such terms includes (1) any collection, treatment, storage and distribution facilities under control of the operator of such system and used primarily in connection with such system, and (2) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.~~ **[Public water systems are classified as follows:]**

A. "Community Water System (CWS)" means a public water system which serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents;

B. "Non-Transient Non-Community Water System (NTNCWS)" means a public water system that is not a community water system and that regularly serves at least twenty-five (25) of the same persons over six (6) months per year;

C. "Non-Community Water System (NCWS)" means a public water system which has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year;

D. "Miscellaneous Public Water System (MPWS)" means a public water system that is neither community, non-community nor non-transient non-community.

22.1**[~~58~~59]**"Radioactivity" means the spontaneous, uncontrollable disintegration of the nucleus of an atom with the emission of particles and rays.

22.1**[~~59~~60]**"Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A millirem is one one-thousandth (1/1000) of a rem.

22.1**[~~60~~61]** "Repeat Compliance Period" means any subsequent compliance period after the initial compliance period.

22.1**[~~61~~62]** "Residual Disinfectant Concentration (C)" means the concentration of disinfectant measured in mg/L in a representative sample of water.

22.1**[~~62~~63]** "Sanitary Survey" means a review of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of: evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing potable drinking water; or updating the inventory information. Sanitary surveys are classified as follows:

A. Class 1 - on-site review.

B. Class 2 - telephone review.

22.1**[~~63~~64]** "Secondary Maximum Contaminant Level (SMCL)" means an MCL which involves a biological, chemical or physical characteristic of water that may adversely affect the taste, odor, color or appearance (aesthetics), which may thereby affect public confidence or acceptance of the drinking water. This includes the MCLs for aluminum, chloride, color, copper, corrosivity, foaming agents, iron, manganese, odor, pH, silver, sulfate, total dissolved solids and zinc.

22.1**[~~64~~65]** "Sedimentation" means a process for removal of solids before filtration by gravity or separation.

22.1**[~~65~~66]** "Service Connection" means a water line to a dwelling unit or building.

22.1**[~~66~~67]** "Service Line Sample" means a one (1) liter sample of water collected in accordance with Section 22.607G2c that has been standing for at least six (6) hours in a service line.

22.1**[~~67~~68]** "Single Family Structure" means a building constructed as a single family residence that is currently used as either a residence or a place of business.

22.1**[~~68~~89]** "Slow Sand Filtration" means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 meters per hour) resulting in substantial particulate removal by physical and biological mechanisms.

22.1**[~~69~~70]** "Small Water System" means a water system that served 3,300 persons or fewer.

22.1**[~~70~~71]** "Source" means the place from which a system obtains its water. This may be either from underground or from the surface. Surface water may include rivers, lakes, reservoirs, springs, impoundments or a body of water with a surface exposed to the atmosphere.

22.1**[~~71~~72]** "Standard Sample" means the sample size for bacteriological testing and shall consist of:

A. For the fermentation tube test, five (5) standard portions of either twenty (20) milliliters (ml) or one hundred (100) mL.

B. For the membrane filter technique, not less than one hundred (100) mL.

22.1**[~~72~~73]** "**[~~State Board of Health~~][Secretary, Health and Social Services]**" means the agency defined in Title 29, Section (b), Delaware Code.

22.1**[~~73~~74]** "Supplier of Water" means any person who owns or operates a public water system.

22.1**[~~74~~75]** "Surface Water" means all water which is open to the atmosphere and subject to surface runoff.

22.1**[~~75~~76]** "System with a Single Service Connection" means a system which supplies drinking water to consumers via a single service line.

22.1**[~~76~~77]** "Too Numerous to Count" means that the total number of bacterial colonies exceeds two hundred (200) on a forty-seven (47) millimeter (mm) diameter membrane filter used for coliform detection.

22.1**[~~77~~78]** "Total Coliform-Positive Sample" means any Presence-Absence (P-A) Coliform Test with a result of present (P), any Minimal Medium ONPG-MUG (MMO-MUG) Test with a result of P, any Membrane Filter Technique test with a result of one (1) or more colonies per one hundred (100) ml, or any Multiple Tube Fermentation test with a result of one (1) or more positive tubes.

22.1**[~~78~~79]** "Total Trihalomethanes (TTHMs)" means the sum of the concentration in milligrams per liter of trihalomethane compounds [trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform)] rounded to two significant figures.

22.1**[~~79~~80]** "Treatment Technique Requirement" means a requirement which specifies for a contaminant a specific treatment technique(s) demonstrated to the satisfaction of the Division to lead to a reduction in the level of such contamination sufficient to comply with these Regulations.

22.1**[~~80~~81]** "Trihalomethanes (THMs)" means one of the family of organic compounds, named as derivatives of methane, wherein three (3) of the four (4) hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

22.1**[~~81~~82]** "Turbidity" means a measure of the clarity or cloudiness of water in Nephelometric Turbidity Units (NTUs).

22.1**[~~82~~83]** "Variance" means an allowance to deviate from or to exceed an MCL requirement or treatment technique requirement when necessary treatment techniques are not available (see Section 22.202).

22.1**[~~83~~84]** "Virus" means a virus of fecal origin which is infectious to humans by waterborne transmission.

22.1**[~~84~~85]** "Vulnerable" means subject to contamination, a determination which shall be made by the Division based on previous monitoring results, the number of persons served by the public water system, the proximity of a smaller system to a larger system, the proximity to commercial or industrial use, disposal or storage of volatile synthetic organic compounds (VOCs), and the protection of the water source(s).

22.1**[~~85~~86]** "Waterborne Disease Outbreak" means the significant occurrence of an acute infectious illness, epidemiologically associated with the ingestion of water from a public water system which is deficient in treatment, as determined by the Division.

22.1**[~~86~~87]** "Water Distribution System" means the pumps, piping and storage facilities from the source(s)/ treatment plant to the property line of the ultimate consumer.

22.1**[~~87~~88]** "Water Supply System" means the structures, equipment and appurtenances for collection, treatment, storage and distribution of potable water from the source of supply to the free-flowing outlet of the ultimate consumer.

SECTION 22.2 GENERAL PROVISIONS

22.201 "Application": These regulations shall apply to all public water systems in the State of Delaware.

22.202 "Variance:

A. The **[~~State Board of Health~~][Secretary, Health and Social Services]** may grant one or more variances to any PWS from:

1. Any requirement respecting a MCL of an applicable primary or secondary drinking water requirement upon finding that:

a. Because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the MCLs of such drinking water regulations despite application of the best technology, treatment techniques or other means, which the **[~~State Board of Health~~][Secretary, Health and Social Services]** finds are generally available (taking costs into consideration) and;

b. The granting of a variance will not result in an unreasonable risk to the health of persons served by the PWS.

2. Any requirement of a specified treatment technique of an applicable primary or secondary drinking water requirement upon a finding that the PWS applying for the variance has demonstrated that such treatment technique is not necessary to protect the health of persons because of the nature of the raw water source of such system.

B. A supplier of water may request the granting of variance for a PWS by submitting a written request to the **[~~State Board of Health~~][Secretary, Health and Social Services]**. Suppliers of water may submit a joint request for variances when they seek similar variances under similar circumstances. Any written request for a variance or variances shall include the following information:

1. The nature and duration of the variance requested;

2. Relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the requirements of the PMCLs;

3. For any request made under this Section, the following is required:

a. Explanation in full and evidence of the best available treatment technology and techniques.

b. Economic and legal factors relevant to ability to comply.

c. Analytical results of raw water quality relevant to the variance requested.

d. A proposed compliance schedule, including the date each step toward compliance will be achieved. Such schedule shall include as a minimum the following dates:

1. Date by which arrangement for alternative raw water source or improvement of existing raw water source will be completed.

2. Date of initiation of the connection of the alternative raw water source of improvement of existing raw water source will be completed.

3. Date by which final compliance is to be achieved.

e. A plan for the provision of safe drinking water in the case of an excessive rise in the contaminant level for which the variance is requested.

f. A plan for interim control measures during the effective period of variance.

4. A statement that the water supplier will perform monitoring and other reasonable requirements prescribed by the **~~[State Board of Health]~~[Secretary, Health and Social Services]** as a condition to the variance.

5. Other information, if any, believed to be pertinent by the applicant, or such information as the **~~[State Board of Health]~~[Secretary, Health and Social Services]** may require.

C. The **~~[State Board of Health]~~[Secretary, Health and Social Services]** shall notify the applicant in writing of the disposition of the variance request within ninety (90) days of receipt of request.

1. If the **~~[State Board of Health]~~[Secretary, Health and Social Services]** decides to deny the application for a variance, it shall notify the applicant of its intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial, and shall offer the applicant an opportunity to present, within thirty (30) days of receipt of the notice, additional information or argument to the **~~[State Board of Health]~~[Secretary, Health and Social Services]**. It shall make a final determination on the request within thirty (30) days after receiving any such additional information or argument. If no additional information or argument is submitted by the applicant, the application shall be denied.

2. If the **~~[State Board of Health]~~[Secretary, Health and Social Services]** proposes to grant a variance request submitted pursuant to this Section, it shall notify the applicant of its decision in writing. Such notice shall identify the variance, the facility covered and conditions of the variance and shall specify the period of time for which the variance will be effective.

D. No variances from the requirements of Section 22.51 (Microbiological requiremnts) shall be permitted.

E. No variances from the requirements of Section 22.10 (Surface Water Treatment Rule) shall be permitted.

22.203"Exemption

A. The **~~[State Board of Health]~~[Secretary, Health and Social Services]** may exempt any PWS from:

1. Any requirement respecting an MCL or any treatment technique requirement or from both, of an applicable primary drinking water regulation upon finding that:

a. Due to compelling factors (which may include economic factors) the PWS is unable to comply with such contaminant level or treatment technique requirement;

b. The PWS was in operation on the effective date of such contaminant level or treatment technique requirement and;

c. The granting of the exemption will not result in an unreasonable risk to health.

B. A supplier of water may request the granting of any exemption by submitting a request in writing to the **~~[State Board of Health]~~[Secretary, Health and Social Services]**. Suppliers of water may submit a joint request for exemptions when they seek similar exemptions under similar circumstances. Any written request for an exemption or exemptions shall include the following information:

1. The nature and duration of the exemption requested.

2. Relevant analytical results of water quality sampling of the system, including result of relevant tests conducted pursuant to the requirements of the Regulations.

3. Explanation of the compelling factors such as time or economic factors which prevent such system from achieving compliance.

4. A proposed compliance schedule, including the date when each step toward compliance will be achieved.

5. Other information, if any, believed to be pertinent by the applicant or such information as the **~~[State~~**

~~Board of Health~~][Secretary, Health and Social Services] may require.

C. The ~~[State Board of Health]~~[Secretary, Health and Social Services] shall notify the applicant in writing of the disposition of the exemption request within ninety (90) days of receipt of request.

1. If the ~~[State Board of Health]~~[Secretary, Health and Social Services] decides to deny the application for exemption, it shall notify the applicant of its intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial, and shall offer the applicant an opportunity to present within thirty (30) days of receipt of the notice additional information or argument to the ~~[State Board of Health]~~[Secretary, Health and Social Services]. It shall make a final determination on the request within thirty (30) days after receiving any such additional information or argument. If no additional information or argument is submitted by the applicant, the application shall be denied.

2. If the ~~[State Board of Health]~~[Secretary, Health and Social Services] grants an exemption request submitted pursuant to this Section, it shall notify the applicant of its decision in writing. Such notice shall provide that the exemption will be terminated when the system comes into compliance with the applicable regulations, and may be terminated upon a finding by the ~~[State Board of Health]~~[Secretary, Health and Social Services] that the system has failed to comply with any requirements of a final schedule.

a. The ~~[State Board of Health]~~[Secretary, Health and Social Services] shall propose a schedule for:

1. Compliance (including increments of progress) by the public water system with each contaminant level requirement and treatment technique requirement covered by the exemption and;

2. Implementation by the public water system of such control measures as the ~~[State Board of Health]~~[Secretary, Health and Social Services] may require for each contaminant covered by the exemption.

b. The schedule shall be prescribed by the ~~[State Board of Health]~~[Secretary, Health and Social Services] within one (1) year after the granting of the exemption subsequent to provision of opportunity for hearing pursuant to Section 22.205. An exemption from a MCL or a treatment technique requirement if granted to a PWS is done so for a specific period of time. If any of the MCLs or treatment technique requirements are revised, then all exemptions from these revised standards shall terminate seven (7) years from the effective date of revision for single PWSs and nine (9) years for regional PWSs.

D. No exemptions from the requirements of Section 22.51 (Microbiological requiremnts) shall be permitted.

E. No exemptions from the requirements of Section 22.10 (Surface Water Treatment Rule) shall be permitted.

22.204 Variances and Exemptions from MCLs for VOCs

A. The Division hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the MCLs for VOCs: removal using packed tower aeration; removal using granular activated carbon (except for Vinyl Chloride), removal using oxidation or other method(s) approved by the Division. See Section 22.63 for a listing of the best available technologies.

B. The Division shall require CWSs and NTNCWSs to install and/or use any of the treatment methods identified in paragraph A of this Section as a condition for granting a variance or exemption except as provided in paragraph C of this Section. If, after the system's installation of the treatment method, the system cannot meet the MCL, the system shall be eligible for a variance or exemption under the provisions of Section 22.202 or 22.203 respectively.

C. If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in paragraph A of this Section would only achieve a minimal reduction in the contaminants, the Division may issue a schedule of compliance that requires the system being granted the variance or exemption to examine other treatment methods as a condition of obtaining the variance or exemption.

D. If the Division determines that a treatment method identified in paragraph C of this Section is technically feasible, the Division may require the system to install and/or use that treatment method in connection with a compliance schedule issued under the provisions of Section 22.202 or 22.203. The Division's determination shall be based on studies by the system and other relevant information.

22.205 Public Hearing: Before a variance or exemption granted pursuant to Sections 22.202 and 22.203 may take effect, the ~~[State Board of Health]~~[Secretary, Health and Social Services] shall provide notice and opportunity for public hearing on the variance or exemption. A notice given pursuant to the preceding sentence may cover the granting of more than one variance or exemption and hearing held

pursuant to such notice shall include each of the variances and exemptions covered by the notice. Public notice of an opportunity for hearing on a variance or exemption shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed variance or exemption. Notification shall include posting of a notice in the principal post office of each municipality or area served by the PWS and publishing of a notice in a newspaper or newspapers or general circulation in the area served by the PWS. Such notice shall include a summary of the proposed variance or exemption and shall inform interested persons that they may request a public hearing on the proposed variance or exemption. Requests must be submitted in writing to the **~~[State Board of Health]~~[Secretary, Health and Social Services]** within thirty (30) days after issuance of the public notices. Information needed in the formal hearing request will be listed on the public notice. Upon receipt of one or more formal hearings requests, the **~~[State Board of Health]~~[Secretary, Health and Social Services]** will give notice as set forth in this Section, of any hearings to be held. Notice shall also be sent to the person or persons requesting the hearing. Notice shall include pertinent information on the subject to be covered along with dates, times and telephone numbers of agencies and people involved. The disposition of the variance or exemption shall become effective thirty (30) days after notice of opportunity for hearing is given, if no request for hearing submitted and the **~~[State Board of Health]~~[Secretary, Health and Social Services]** does not determine to hold a public hearing on its own motion.

22.206 Right of Entry: The Director of the Division or his/her designee shall have the right of entry, during reasonable hours and in a reasonable manner and without fee or hindrance, for the purpose of conducting a sanitary survey and/or sampling of any public water supply and all water furnished by any public water supplier, whether or not the Division has evidence that the system is in violation of an applicable legal requirement.

22.207 Prohibiting Water Usage: The Division may prohibit the use of sources of water which after treatment do not provide water conforming to the standards established by these Regulations or which for any reason may pose a threat to the public's health.

22.208 Separability: If any provision of these Regulations is held invalid, such invalidity shall not affect other provisions which can be given effect without the invalid provision.

22.209 Enforcement of Regulations: All PWSs must be operated in compliance with the requirements as set forth in these Regulations.

A. Notice: Whenever the Director of the Division, or his/her appointed representative, has reason to believe that a violation of any of these Regulations has occurred or is occurring, the Division shall notify the alleged violator. Such notice shall be in writing, may be sent by Certified Mail, or hand delivered, shall cite the Regulation or Regulations that are allegedly being violated, and shall state the facts which form the basis for believing that the violation has occurred or is occurring.

B. Orders: Notice of a violation may be accompanied by an order that requires that certain corrective action be taken. The order shall be signed by the Director or his/her designee or any of his/her appointed representatives and may require:

1. The immediate cessation or correction of the violation.

2. The acquisition or use of additional equipment, supplies or personnel to insure that the violation does not recur.

3. The submission of a plan to prevent future violations to the Division for review and approval.

4. The submission of an application for a variance or exemption.

5. Any other corrective action deemed necessary for proper compliance with the Regulations including interim remedies pending correction of violations.

C. Hearing Request: Any supplier of water who receives an order from the Division may submit a request for a hearing to the **~~[State Board of Health]~~[Secretary, Health and Social Services]** to contest the order.

D. Compliance with Effective Orders: Should any public water supplier fail to comply with any of these Regulations, the **~~[State Board of Health]~~[Secretary, Health and Social Services]** may apply to an appropriate court for an injunction or other legal process to prevent or stop any practice which is in violation of these regulations.

E. Penalties: ~~Any person who neglects or fails to comply with these Regulations shall be subject to provisions under 16 Del. C. S107.~~ The Secretary shall have the authority to impose an administrative penalty upon any public water system that violates water quality standards pursuant to Title 16, Chapter 1, § 122(3)(C). The administrative penalty shall be as follows:

1. For systems serving a population of more than 10,000 people, not less than $1,000 nor more than $10,000 per day per violation; and

2. For any other system, the administrative penalty shall be not less than $100 nor more than $10,000 per day per violation.

22.210 Emergency Orders: The Director of the Division or his/her appointed representative may issue emergency

orders in any case where there is an imminent danger to the health of the public resulting from the operation of any waterworks or the source of a water supply. An emergency order may be communicated by the best practical notice under the circumstances, and is effective immediately upon receipt. The order may state any requirements necessary to remove the danger to the health of the public, including the immediate cessation of the operation of the PWS. Emergency orders shall be effective for a period not exceeding sixty (60) days at the determination of the Director of the Division or his/her representative. Should any public water supplier fail to comply with an emergency order, the **~~[State Board of Health]~~[Secretary, Health and Social Services]** may apply to an appropriate court for an injunction or other legal process to prevent or stop any practice which is in violation of these Regulations.

22.211 Plans and Specifications:

[A.] No person shall construct a new Public Water System or alter an existing Public Water System **~~[or alter an existing PWS until two (2) copies of plans and specifications have been submitted to and approved by the Division.]~~** without a Certificate of Approval for Construction.

[1. Systems shall submit two (2) copies of plans and specifications. Plans shall be developed utilizing the latest edition of Ten States Standards, NSF Standards, or approved equivalent and other technical information as required by the Division.

2. Construction shall be in accordance with the approved plans and all conditions listed in the Certificate of Approval to Construct.]

3. Whenever it is discovered that either of the above are occurring without such approval, the Director of the Division may order the owner, supplier of water or contractor to immediately stop the work and submit plans and specifications to the Division. After the submittal, any part of the system that has already been installed and is not in compliance shall be removed, altered or replaced in order to achieve compliance. Plans and specifications shall be on paper no larger than 30" x 42". **[The]** **~~[Within thirty (30) days of receipt of plans and specifications, the]~~** Division shall notify the person who submitted the plans and specifications if they have been approved or disapproved. Such notice shall specify any conditions of approval or any reasons for disapproval. Approvals are valid for one (1) year **[~~and construction shall begin within that time.~~ Failure to begin construction within one year of approval shall cause the Certificate of Approval for Construction to lapse and become void.]** All construction shall be in accordance with the approved plans and all conditions listed in the Certificate of Approval.

[B. Effective October 1, 1999, all new community and non-transient non-community systems must comply with §22.211A, and, in addition, submit an Application for Capacity Development review. The plans and specifications must be prepared by a professional engineer utilizing the capacity development principles specified in §22.106.]

22.**[~~303~~212]**Approval of Water Supplies:

[A. ~~Approval of water supplies shall be dependent in part upon:~~ No person shall operate a newly constructed public water system or renovated portion of an existing water system without a Certificate of Approval to Operate. A Certificate of Approval to Operate shall be issued by the Division to water systems which meet the following requirements:

1. ~~Enforcement of~~ Compliance with] rules and regulations to prevent development of health hazards;

2. Adequate protection of the water quality throughout all parts of the system, as demonstrated by sanitary surveys;

3. Proper operation of the water supply system under the responsible charge of personnel whose qualifications meet the certification requirements of the Division**~~ [at such time as these requirements are established;]~~**

4. Adequate capacity to meet anticipated peak demands while maintaining not less than twenty-five (25) pounds per square inch (psi) and not more than one hundred (100) psi at ground level at all points in the water distribution system; and

5. Records of laboratory examinations showing **~~[consistent]~~** compliance with the water quality requirements of these Regulations.

[B. Effective October 1, 1999, in addition to the requirements in §22.212A, approval of new community and non-transient non-community water systems shall be dependent upon the following:

1. A certification by a professional engineer that the system was built in accordance with approved plans and specifications and all conditions of the Certificate of Approval for Construction and;

2. Managerial and financial information as required by the Division to demonstrate compliance with Capacity Development as defined in §22.106. This information may include, but not be limited to; annual reports, water system plans or business plans, self assessments/peer reviews, criteria used by lenders, financial viability assessment methods, financial and managerial training.

3. Failure to comply with §22.212B.1 and 2 shall result in the Division denying the application for a Certificate of Approval to Operate. A new water system shall not commence operations without a Certificate of Approval to Operate.]

22.2**[~~12~~13]** Siting Requirements: Before any person

may enter into a financial commitment for or initiate construction of a new PWS or increase the capacity of an existing PWS, he shall notify the Division and, to the extent practicable, avoid locating part or all of the new or expanded facility at a site which:

A. Is subject to a significant risk from earthquakes, floods, fires or other disasters which could cause a breakdown of the PWS or a portion thereof or;

B. Except for intake structures, is within the floodplain of a one hundred (100) year flood or is lower than any recorded high tide where appropriate records exist.

22.2**[~~13~~14]** Approved Laboratory: For the purpose of determining compliance with Sections 22.5, 22.6, 22.7 and 22.9, samples may be considered only if they have been analyzed by the Division, EPA, or an approved laboratory, except that measurements for turbidity, free chlorine residual, temperature and pH may be performed by any person acceptable to the Division.

22.2**[~~14~~15]** Quality: Drinking water shall not contain impurities in concentrations which may be hazardous to the health of the consumers. Substances used in its treatment shall not remain in the water in concentrations greater than required by good practice. Substances which may have deleterious physiological effects, or for which physiological effects are not known, shall not be introduced into the system in a manner which would permit them to reach the consumer.

22.2**[~~15~~16]** Required Sampling, Monitoring or Analyses: In any case where the Division does not perform sampling, monitoring or analyses required by these Regulations, the supplier of water shall be responsible for performing this sampling, monitoring or analyses.

22.2**[~~16~~17]**Date of Effect: These Regulations shall become effective on December 10, 1993.

SECTION 22.3 SOURCE AND PROTECTION

22.301 Water Source Desirability: Drinking water shall be obtained from the most desirable source which is feasible, and efforts must be made to prevent or control pollution of the source. If the source fails to meet the bacteriological standards of Section 22.5 and is not already disinfecting pursuant to Section 22.802, it may be required to do so in order to meet the bacteriological standards.

22.302 Sanitary Surveys: Sanitary surveys shall be made by the Division in order to locate and identify health hazards which might exist in the water supply system. The manner and frequency of making these surveys, and the rate at which discovered health hazards are to be removed, shall be in accordance with a program approved by the Division.

~~[22.303Approval of Water Supplies: Approval of water supplies shall be dependent in part upon:~~

~~A. Enforcement of rules and regulations to prevent development of health hazards;~~

~~B. Adequate protection of the water quality throughout all parts of the system, as demonstrated by sanitary surveys;~~

~~C. Proper operation of the water supply system under the responsible charge of personnel whose qualifications meet the certification requirements of the Division at such time as these requirements are established;~~

~~D. Adequate capacity to meet anticipated peak demands while maintaining not less than twenty five (25) pounds per square inch (psi) and not more than one hundred (100) psi at ground level at all points in the water distribution system and;~~

~~E. Records of laboratory examinations showing consistent compliance with the water quality requirements of these Regulations.]~~

22.30**[43]** Protection of Water: Water delivered to every consumer by any public water supplier shall be so protected by natural means, by proper constructions or by treatment so as to consistently equal or exceed the requirements herein established.

22.30**[~~54~~]** Monitoring Water Quality: Quality of water delivered by any public water supplier shall be continuously and/or periodically monitored in accordance with requirements herein established or in accordance with such monitoring water system of equal or greater effect as may be proposed by a public water supplier for its own use, subject to Division approval.

22.30**[~~65~~]** Responsibility: For the purpose of application of these Regulations, the supplier of water shall be responsible for the water quality at the user's free flowing outlet except for turbidity and VOCs, which are measured at a representative entry point(s) to the water distribution system.

SECTION 22.4 REPORTING, PUBLIC NOTIFICATION AND RECORD MAINTENANCE

22.40 Reporting

22.401 Results of Test, Measurement or Analysis: Except where a shorter period is specified in this part, the supplier of water shall report to the Division the results of any test, measurement or analysis required by this part within:

A. The first ten (10) days following the month in which the result is received, or

B. The first ten (10) days following the end of the required monitoring period as stipulated by the Division,

whichever of these is shortest.

22.402 Failure to Comply with a PMCL: Unless otherwise stipulated, the supplier of water shall report to the Division within forty-eight (48) hours the failure to comply with any Primary Drinking Water Regulations (including failure to comply with monitoring requirements).

22.403 Analysis Performed by Division of Public Health Laboratory: The supplier of water is not required to report analytical results to the Division in cases where an approved laboratory performs the analyses and reports the results directly to the Division.

22.404 Reporting of Unregulated Contaminants: The owner or operator of a CWS or NTNCWS who is required to monitor under Section 22.621, shall send a copy of the results of such monitoring to the Division within thirty (30) days of receipt and any public notice issued under Section 22.416 to the Division.

22.405 Reporting by Surface Water Systems: A PWS that uses a surface water source or a ground water source under the direct influence of surface water and provides filtration treatment must report monthly to the Division the information specified in this paragraph, beginning June 29, 1993.

A. Turbidity measurements must be reported within ten (10) days after the end of each month the system serves water to the public. Information that must be reported includes:

1. The total number of filtered water turbidity measurements taken during the month.

2. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits for the filtration technology being used.

3. The date and value of any turbidity measurements taken during the month which exceed five (5) NTU.

B. Disinfection information must be reported to the Division within ten (10) days after the end of each month the system serves water to the public. Information that must be reported includes:

1. For each day, the lowest measurement of residual disinfectant concentration in mg/L in water entering the distribution system.

2. The date and duration of each period when the residual disinfectant concentration in water entering the distribution system fell below 0.3 mg/L and when the Division was notified of the occurrence.

3. The following information on the samples taken in the distribution system in conjunction with total coliform monitoring:

a. Number of instances where the residual disinfectant concentration is measured;

b. Number of instances where the residual disinfectant concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;

c. Number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured;

d. Number of instances where no residual disinfectant concentration is detected and where HPC is greater than 500/ml;

e. Number of instances where the residual disinfectant concentration is not measured and HPC is greater than 500/ml;

f. For the current and previous month the system serves water to the public, the value of "V" in the following formula:

$$V = \frac{c + d + e}{a + b} \times 100$$

where:a = number of instances where the residual disinfectant concentration is measured;

n = number of instances where the residual disinfectant concentration is not measured but HPC is measured;

c = number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured;

d = number of instances where no residual disinfectant concentration is detected and where the HPC is >500/ml; and e = number of instances where the residual disinfectant concentration is not measured and HPC is >500/ml.

g. If the Division determines, based on site-specific considerations, that a system has no means for having a sample transported and analyzed for HPC by an approved laboratory within the requisite time and temperature conditions, and that the system is providing adequate disinfection in the distribution system, the requirements of paragraph B.3.a-f of this Section do not apply.

4. A system need not report the data listed in paragraph B.1. of this Section if all the data listed in paragraphs B.1.-3. of this Section remain on file at the system and the Division determines that the system has submitted all the information required by paragraphs B.1.-3. of this Section for the last twelve (12) months.

C. Each system, upon discovering that a waterborne disease outbreak potentially attributable to that water system has occurred, must report that occurrence to the Division as soon as possible, but no later than by the end of the next business day. If at any time the turbidity exceeds five (5) NTU, the system must inform the Division as soon as possible, but no later than the end of the next business day. If at any time the residual falls below 0.3 mg/L in the water entering the distribution system, the system must notify the Division as soon as possible, but no later than by the end of the next business day. The system must also

notify the Division by the end of the next business day whether or not the residual was restored to at least 0.3 mg/L within four (4) hours.

22.406 Reporting of Chemical Overfeed Incidents or Unusual Events: It is the responsibility of the owner and/or the operator of a Public Water System to report to the Division, within 24 hours, any incidents of chemical overfeed and/or unusual events.

22.41 Public Notification

22.411 Circumstances for Public Notification: It shall be the duty and responsibility of a water supply owner to give public notification under any of the following circumstances:

A. When any applicable PMCL has been exceeded.

B. Violation of the PMCL for total coliforms, when fecal coliforms or E. coli are present in the water distribution system.

C. Failure to comply with an established treatment technique.

D. Failure to comply with the requirements of any schedule prescribed pursuant to a PMCL variance or exemption.

E. The water supply has been granted or has in effect a variance or exemption from an applicable PMCL variance or exemption.

F. Failure to comply with monitoring requirements.

G. Failure to comply with an applicable testing procedure.

H. Following notification by the Division of any violation of these Regulations which stipulates public notification.

22.412 Content of a Public Notice

A. Public notice given pursuant to Section 22.411 shall be written in a manner reasonably designed to fully inform the users of the PWS of the reasons for the notice.

B. The public notice shall:

1. Be conspicuous.

2. Disclose all material facts regarding the subject.

3. Disclose the nature of the problem.

4. When appropriate, provide a clear statement that a PMCL has been exceeded.

5. When appropriate, describe any preventive measures that should be taken by the public.

6. State any potential adverse health affects.

7. State the population at risk.

8. State the necessity for seeking alternate water supplies, if any.

9. State preventive measures the consumer should take until the violation is corrected.

10. Include the phone number of the owner, operator, or designee of the public water system as a source of additional information concerning the notice.

11. Where appropriate, be multi-lingual.

C. The public notice shall not:

1. Use unduly technical language.

2. Use unduly small print.

3. Use any other methods which would frustrate the purpose of the notice.

D. The public notice may include:

1. A balanced explanation of the significance or seriousness to the public health of the subject of the notice.

2. A fair explanation of steps taken by the system to correct any problem.

3. The results of any additional sampling.

E. Mandatory Health Effects Language: When providing the information on potential adverse health effects required by B.6 of this Section in notices of violations of MCLs or treatment technique requirements, or notices of the granting or the continued existence of exemptions or variances, or notices of failure to comply with a variance or exemption schedule, the owner or operator of a PWS must include the following mandatory language specific to each contaminant:

1. Microbiological Contaminants: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that the presence of microbiological contaminants are a health concern at certain levels of exposure. If water is inadequately treated, microbiological contaminants in that water may cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. EPA has set enforceable requirements for treating drinking water to reduce the risk of these adverse health effects. Treatment such as filtering and disinfecting the water removes or destroys microbiological contaminants. Drinking water which is treated to meet EPA requirements is associated with little to none of this risk and should be considered safe.

2. Total Coliforms: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that the presence of total coliforms is a possible health concern. Total coliforms are common in the environment and are generally not harmful themselves. The presence of these bacteria in drinking water, however, generally is a result of a problem with water treatment or the pipes which distribute the water, and indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and associated headaches and fatigue. These symptoms,

however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. EPA has set an enforceable drinking water standard for total coliforms to reduce the risk of these adverse health effects. Under this standard, no more than 5.0 percent of the samples collected during the month can contain these bacteria, except that systems collecting fewer than forty (40) samples/month that have one (1) total coliform positive sample per month are not violating the standard. Drinking water which meets this standard is usually not associated with a health risk from disease-causing bacteria and should be considered safe.

3. Fecal Coliforms/E. coli: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that the presence of fecal coliforms or E. coli is a serious health concern. Fecal coliforms and E. coli are generally not harmful themselves, but their presence in drinking water is serious because they usually are associated with sewage or animal wastes. The presence of these bacteria in drinking water is generally a result of a problem with water treatment or the pipes which distribute the water, and indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. EPA has set an enforceable drinking water standard for fecal coliforms and E. coli to reduce the risk of these adverse health effects. Under this standard, all of the drinking water samples must be free of these bacteria. Drinking water which meets this standard is associated with little or none of this risk and should be considered safe. State and local health authorities recommend that consumers take the following precautions: (To be inserted by the public water supplier upon direction of the Division).

4. Antimony: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that antimony is a health concern at certain levels of exposure. This inorganic chemical occurs naturally in soils, ground water and surface waters and is often used in the flame retardant industry. It is also used in ceramics, glass, batteries, fireworks and explosives. It may get into drinking water through natural weathering of rock, industrial production, municipal waste disposal or manufacturing processes. This chemical has been shown to decrease longevity, and altered blood levels of cholesterol and glucose in laboratory animals such as rats exposed to high levels during their lifetimes. EPA has set the drinking water standard for antimony a 0.006 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to antimony.

5. Asbestos: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that asbestos fibers greater than 10 micrometers in length are a health concern at certain levels of exposure. Asbestos is a naturally occurring mineral. Most asbestos fibers in drinking water are less than 10 micrometers in length and occur in drinking water from natural sources and from corroded asbestos-cement pipes in the distribution system. The major uses of asbestos were in the production of cements, floor tiles, paper products, paint, and caulking; in transportation-related applications; and in the production of textiles and plastics. Asbestos was once a popular insulating and fire retardant material. Inhalation studies have shown that various forms of asbestos have produced lung tumors in laboratory animals. The available information on the risk of developing gastrointestinal tract cancer associated with the ingestion of asbestos from drinking water is limited. Ingestion of intermediate-range chrysotile asbestos fibers greater than 10 micrometers in length is associated with causing benign tumors in male rats. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for asbestos at 7 million long fibers per liter to reduce the potential risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to asbestos.

6. Barium: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that barium is health concern at certain levels of exposure. This inorganic chemical occurs naturally in some aquifers that serve as sources of ground water. It is also used in oil and gas drilling muds, automotive paints, bricks, tiles and jet fuels. It generally gets into drinking water after dissolving from naturally occurring minerals in the ground. This chemical may damage the heart and cardiovascular system, and is associated with high blood pressure in laboratory animals such as rats exposed to high levels during their lifetimes. In humans, EPA believes that effects from barium on blood pressure should not occur below 2 parts per million (ppm) in drinking water. EPA has set the drinking water standard for barium at 2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to barium.

7. Beryllium: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that beryllium is a health concern at certain levels of exposure. This inorganic metal occurs naturally in soils, ground water and surface waters

and is often used in electrical equipment and electrical components. It generally gets into water from runoff from mining operations, discharge from processing plants and improper waste disposal. Beryllium compounds have been associated with damage to the bones and lungs and induction of cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. There is limited evidence to suggest that beryllium may pose a cancer risk via drinking water exposure. Therefore, EPA based the health assessment on noncancer effects with an extra uncertainty factor to account for possible carcinogenicity. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for beryllium at 0.004 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to beryllium.

8. Cadmium: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that cadmium is a health concern of certain levels of exposure. Food and smoking of tobacco are common sources of general exposure. This inorganic metal is a contaminant in the metals used to galvanize pipe. It generally gets into water by corrosion of galvanized pipes or by improper waste disposal. This chemical has been shown to damage the kidney in animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Some industrial workers who were exposed to relatively large among of this chemical during working careers also suffered damage to the kidney. EPA has set the drinking water standard for cadmium at 0.005 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to cadmium.

9. Chromium: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that chromium is a health concern at certain levels of exposure. This inorganic metal occurs naturally in the ground and is often used in the electroplating of metals. It generally gets into water from runoff from old mining operations and improper waste disposal from plating operations. This chemical has been shown to damage the kidney, nervous system, and the circulatory system of laboratory animals such as rats and mice when the animals are exposed at high levels. Some humans who were exposed to high levels of this chemical suffered liver and kidney damage, dermatitis and respiratory problems. EPA has set the drinking water standard for chromium at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to chromium.

10. Copper: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that copper is a health concern at certain exposure levels. Copper, a reddish-brown metal, is often used to plumb residential and commercial structures that are connected to water distribution systems. Copper contaminating drinking water as a corrosion by-product occurs as the result of the corrosion of copper pipes that remain in contact with water for a prolonged period of time. Copper is an essential nutrient, but at high doses it has been shown to cause stomach and intestinal distress, liver and kidney damage, and anemia. Persons with Wilson's disease may be at a higher risk of health effects due to copper than the general public. EPA's national primary drinking water regulation requires all public water systems to install optimal corrosion control to minimize copper contamination resulting from the corrosion of plumbing materials. Public water systems serving 50,000 people or fewer that have copper concentrations below 1.3 parts per million (ppm) in more than 90% of tap water samples (the EPA "action level") are not required to install or improve their treatment. Any water system that exceeds the action level must also monitor their source water to determine whether treatment to remove copper in source water is needed.

11. Cyanide: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that cyanide is a health concern at certain levels of exposure. This inorganic chemical is used in electroplating, steel processing, plastics, synthetic fabrics and fertilizer products. It usually gets into water as a result of improper waste disposal. This chemical has been shown to damage the spleen, brain and liver of humans fatally poisoned with cyanide. EPA has set the drinking water standard for cyanide at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meet the EPA standard is associated with little to none of this risk and should be considered safe with respect to cyanide.

12. Lead: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that lead is a health concern at certain exposure levels. Materials that contain lead have frequently been used in the construction of water supply distribution systems, and plumbing systems in private homes and other buildings. The most commonly found materials include service lines, pipes, brass and bronze fixtures, and solders and fluxes. Lead in these materials can contaminate drinking water as a result of the corrosion that takes place when water comes into contact with those materials. Lead can cause a variety of adverse health effects in humans. At relatively low levels of exposure, these effects may include interference with red blood cell chemistry, delays in normal physical and mental development in babies and young

children, slight deficits in the attention span, hearing, and learning abilities of children, and slight increases in the blood pressure of some adults. EPA's national primary drinking water regulation requires all public water systems to optimize corrosion control to minimize lead contamination resulting from the corrosion of plumbing materials. Public water systems serving 50,000 people or fewer that have lead concentrations below 15 parts per billion (ppb) in more than 90% of tap water samples (the EPA "action level") have optimized their corrosion control treatment. Any water system that exceeds the action level must also monitor their source water to determine whether treatment to remove lead in source water is needed. Any water system that continues to exceed the action level after installation of corrosion control and/or source water treatment must eventually replace all lead service lines contributing in excess of 15 (ppb) of lead to drinking water. Any water system that exceeds the action level must also undertake a public education program to inform consumers of ways they can reduce their exposure to potentially high levels of lead in drinking water.

13. Mercury: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that mercury is a health concern at certain levels of exposure. This inorganic metal is used in electrical equipment and some water pumps. It usually gets into water as a result of improper waste disposal. This chemical has been shown to damage the kidney of laboratory animals such as rats when the animals are exposed at high levels over their lifetimes. EPA has set the drinking water standard for mercury at 0.002 parts per million (ppm) to protect against the risk for these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to mercury.

14. Nickel: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nickel poses a health concern at certain levels of exposure. This inorganic metal occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products. It generally gets into water from mining and refining operations. This chemical has been shown to damage the heart and liver in laboratory animals when the animals are exposed to high levels over their lifetimes. EPA has set the drinking water standard at 0.1 parts per million (ppm) for nickel to protect against the risk of these adverse effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to nickel.

15. Nitrate: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. Nitrate is used in fertilizer and is found in sewage and wastes from human and/or farm animals and generally gets into drinking water from those activities. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six months of age. The serious illness in infants is caused because nitrate is converted to nitrite in the body. Nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. The purpose of this notice is to encourage parents and other responsible parties to provide infants with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. EPA has set the drinking water standard at 10 parts per million (ppm) for nitrate to protect against the risk of these adverse effects. EPA has also set a drinking water standard for nitrite at 1 ppm. To allow for the fact that the toxicity of nitrate and nitrite are additive, EPA has also established a standard for the sum of nitrate and nitrite at 10 ppm. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to nitrate.

16. Nitrite: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrite poses an acute health concern at certain levels of exposure. This inorganic chemical is used in fertilizers and is found in sewage and wastes from humans and/or farm animals and generally gets into drinking water as a result of those activities. While excessive levels of nitrite in drinking water have not been observed, other sources of nitrite have caused serious illness and sometimes death in infants under six months of age. The serious illness in infants is caused because nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly. However, in most cases health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. The purpose of this notice is to encourage parents and other responsible parties to provide infants with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. EPA has set the drinking water standard at 1 part per million (ppm) for nitrite to protect against the risk of these adverse effects. EPA has also set a drinking water standard for nitrate (converted to nitrite in humans) at 10 ppm and for the sum of nitrate and nitrite at 10 ppm. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to nitrite.

17. Selenium: The United State Environmental Protection Agency (EPA) sets drinking water standards and has determined that selenium is a health concern at certain high levels of exposure. Selenium is also an essential nutrient at low levels of exposure. This inorganic chemical is found naturally in food and soils and is used in electronics, photocopy operations, and the manufacture of glass, chemicals, drugs, and as a fungicide and a feed additive. In humans, exposure to high levels of selenium over a long period of time has resulted din a number of adverse health effects, including a loss of feeling and control in the arms and legs. EPA has set the drinking water standard for selenium at 0.05 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to selenium.

18. Thallium: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that thallium is a health concern at certain high levels of exposure. This inorganic metal is found naturally in soils and is used in electronics, pharmaceuticals, and the manufacture of glass and alloys. This chemical has been shown to damage the kidney, liver, brain and intestines of laboratory animals when the animals are exposed at high levels over their lifetimes. EPA has set the drinking water standard for thallium at 0.002 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to thallium.

19. Acrylamide: The United States Environmental Protection Agency (EPA) sets drinking standards and has determined that acrylamide is a health concern at certain levels of exposure. Polymers made from acrylamide are sometimes used to treat water supplies to remove particulate contaminants. Acrylamide has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. Sufficiently large doses of acrylamide are known to cause neurological injury. EPA has set the drinking water standard for acrylamide using a treatment technique to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. This treatment technique limits the amount of the polymer which may be added to drinking water to remove particulates. Drinking water systems which comply with this treatment technique have little to no risk and are considered safe with respect to acrylamide.

20. Alachlor: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that alachlor is a health concern at certain levels of exposure. This organic chemical is a widely used pesticide. When soil and climatic conditions are favorable, alachlor may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for alachlor at 0.002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to alachlor.

21. Aldicarb: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that aldicarb is a health concern at certain levels of exposure. Aldicarb is a widely used pesticide.. Under certain soil and climatic conditions (e.g., sandy soil and high rainfall), aldicarb may leach into ground water after normal agricultural applications to crops such as potatoes or peanuts or may enter drinking water supplies as a result of surface runoff. This chemical has been shown to damage the nervous system in laboratory animals such as rats and dogs exposed to high levels. EPA has set the drinking water standard for aldicarb at 0.003 parts pr million (ppm) to protect against the risk of adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to aldicarb.

22. Aldicarb sulfone: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that aldicarb sulfone is a health concern at certain levels of exposure. Aldicarb is a widely used pesticide. Aldicarb sulfone is formed from the breakdown of aldicarb and is considered for registration as a pesticide under the name aldoxycarb. Under certain soil and climatic conditions (e.g., sandy soil and high rainfall) aldicarb sulfone may leach into groundwater after normal agricultural applications to crops such as potatoes or peanuts or may enter drinking water supplies as a result of surface runoff. This chemical has been shown to damage the nervous systems in laboratory animals such as rats and dogs exposed to high levels. EPA has set the drinking water standard for aldicarb sulfone at 0.002 parts per million (ppm) to protect against the risk of adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to aldicarb sulfone.

23. Aldicarb sulfoxide: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that aldicarb sulfoxide is a health concern at certain levels of exposure. Aldicarb is a

widely used pesticide. Aldicarb sulfoxide in ground water is primarily a breakdown of aldicarb. Under certain soil and climatic conditions (e.g., sandy soil and high rainfall), aldicarb sulfoxide may leach into groundwater after normal agricultural applications to crops such as potatoes or peanuts or may enter drinking water supplies as a result of surface runoff. This chemical has been shown to damage the nervous systems in laboratory animals such as rats and dogs exposed to high levels. EPA has set the drinking water standard for aldicarb sulfoxide at 0.004 parts per million (ppm) to protect against the risk of adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to aldicarb sulfoxide.

24. Atrazine: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that atrazine is a health concern at certain levels of exposure. This organic chemical is a herbicide. When soil and climatic conditions are favorable, atrazine may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to affect offspring of rats and the heart of dogs. EPA has set the drinking water standard for atrazine at 0.003 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to atrazine.

25. Benzo(a)pyrene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that benzo(a)pyrene is a health concern at certain levels of exposure. Cigarette smoke and charbroiled meats are a common source of general exposure. The major source of benzo(a)pyrene in drinking water is the leaching from coal tar lining and sealants in water storage tanks. This chemical has been shown to cause cancer in animals such as rats and mice when the animals are exposed at high levels. EPA has set the drinking water standard for benzo(a)pyrene at 0.0002 parts per million (ppm) to protect against the risk of cancer. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to benzo(a)pyrene.

26. Carbofuran: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that carbofuran is a health concern at certain levels of exposure. This organic chemical is a pesticide. When soil and climatic conditions are favorable, carbofuran may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to damage the nervous and reproductive systems of laboratory animals such as rats and mice exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical during their working careers also suffered damage to the nervous system. Effects on the nervous system are generally rapidly reversible. EPA has set the drinking water standard for carbofuran at 0.04 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to carbofuran.

27. Chlordane: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that chlordane is a health concern at certain levels of exposure. This organic chemical is a pesticide used to control termites. Chlordane is not very mobile in soils. It usually gets into drinking water after application near water supply intakes or wells. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for chlordane at 0.002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to chlordane.

28. Dalapon: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that dalapon is a health concern at certain levels of exposure. This organic chemical is a widely used herbicide. It may get into drinking water after application to control grasses in crops, drainage ditches and along railroads. This chemical has been shown to cause damage to the kidney and liver in laboratory animals when the animals are exposed to high levels over their lifetimes. EPA has set the drinking water standard for dalapon at 0.2 parts per million (pp) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to dalapon.

29. Dibromochloropropane (DBCP): The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that DBCP is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, dibromochloropropane may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for DBCP at 0.0002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking

water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to DBCP.

30. Dichloromethane: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that dichloromethane (methylene chloride) is a health concern at certain levels of exposure. This organic chemical is a widely used solvent. It is used in the manufacture of paint remover, as a metal degreaser and as an aerosol propellant. It generally gets into drinking water after improper discharge of waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and ice when the animals re exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed overlong periods of time. EPA has set the drinking water standard for dichloromethane at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe with respect to dichloromethane.

31. Di(2-ethylhexyl)adipate: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that di(2-ethylhexyl)adipate is a health concern at certain levels of exposure. Di(2-ethylhexyl)adipate is a widely used plasticizer in a variety of products, including synthetic rubber, food packaging materials and cosmetics. It may get into drinking water after improper waste disposal. This chemical has been shown to damage liver and testes in laboratory animals such as rats and mice exposed to high levels. EPA has set the drinking water standard for di(2-ethylhexyl)adipate at 0.4 parts per million (ppm) to protect against the risk of adverse health effects. Drinking water which meets the EPA standards is associated with little to none of this risk and should be considered safe with respect to de(2-ethylhexyl)adipate.

32. Di(2-ethylhexyl)phthalate: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that di(2-ethylhexyl)phthalate is a health concern at certain levels of exposure. Di(2-ethylhexyl)phthalate is a widely used plasticizer, which is primarily used in the production of polyvinyl chloride (PVC) resins. It may get into drinking water after improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice exposed to high levels over their lifetimes. EPA has set the drinking water standard for di(2-ethylhexyl)phthalate at 0.006 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to di(2-ethylhexyl)phthalate.

33. Dinoseb: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that dinoseb is a health concern at certain levels of exposure. Dinoseb is a widely used pesticide and generally gets into drinking water after application on orchards, vineyard and other crops. This chemical has been shown to damage the thyroid and reproductive organs in laboratory animals such as rats exposed to high levels. EPA has set the drinking water standard for dinoseb at 0.007 parts per million (ppm) to protect against the risk of adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to dinoseb.

34. Diquat: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that diquat is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control terrestrial and aquatic weeds. It may get into drinking water by runoff into surface water. This chemical has been shown to damage the liver, kidney and gastrointestinal tract and cause cataract formation in laboratory animals such as dogs and rats exposed at high levels over their lifetimes. EPA has set the drinking water standard for diquat at 0.02 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to diquat.

35. 2,4-D: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 2,4-D is a health concern at certain levels of exposure. This organic chemical is used as a herbicide and to control algae in reservoirs. When soil and climatic conditions are favorable, 2,4-D may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to damage the liver and kidney of laboratory animals such as rats exposed at high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. EPA has set the drinking water standard for 2,4-D at 0.07 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to 2,4-D.

36. Endothall: The United States Environmental Protection Agency (EPA) has determined that endothall is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control terrestrial and aquatic weeds. It may get into water by runoff into surface water. This chemical has been shown to damage the liver, kidney, gastrointestinal tract and

reproductive system of laboratory animals such as rats and mice exposed at high levels over their lifetimes. EPA has set the drinking water standard for endothall at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to endothall.

37. Endrin: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that endrin is a health concern at certain levels of exposure. This organic chemical is a pesticide no longer registered for use in the United States. However, this chemical is persistent in treated soils and accumulates in sediments and aquatic and terrestrial biota. This chemical has been shown to cause damage to the liver, kidney and heart in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. EPA has set the drinking water standard for endrin at 0.002 parts per million (ppm) to protect against the risk of these adverse health effects which have been observed in laboratory animals. Drinking water that meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to endrin.

38. Epichlorohydrin: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that epichlorohydrin is a health concern at certain levels of exposure. Polymers made from epichlorohydrin are sometimes used in the treatment of water supplies as a flocculent to remove particulates. Epichlorohydrin generally gets into drinking water by improper use of these polymers. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for epichlorohydrin using a treatment technique to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. This treatment technique limits the amount of epichlorohydrin in the polymer and the amount of the polymer which may be added to drinking water as a flocculent to remove particulates. Drinking water systems which comply with this treatment technique have little to no risk and are considered safe with respect to epichlorohydrin.

39. Ethylene dibromide (EDB): The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that EDB is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, EDB may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standards for EDB at 0.00005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect EDB.

40. Glyphosate: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that glyphosate is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control grasses and weeds. It may get into drinking water by runoff into surface water. This chemical has been shown to cause damage to the liver and kidneys in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. EPA has set the drinking water standard for glyphosate at 0.7 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to glyphosate.

41. Heptachlor: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that heptachlor is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, heptachlor may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standards for heptachlor at 0.0004 part per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to heptachlor.

42. Heptachlor Epoxide: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that heptachlor epoxide is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, heptachlor epoxide may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking

water standards for heptachlor epoxide at 0.0002 part per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to heptachlor epoxide.

43. Hexachlorobenzene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that hexachlorobenzene is a health concern at certain levels of exposure. This organic chemical is produced as an impurity in the manufacture of certain solvents and pesticides. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for hexachlorobenzene at 0.001 parts per million (ppm) to protect against the risk of cancer and other adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to hexachlorobenzene.

44. Hexachlorocyclopentadiene: The United States Environmental Protection Agency (EPA) establishes drinking water standards and has determined that hexachlorocyclopentadiene is a health concern at certain levels of exposure. This organic chemical is used as an intermediate in the manufacture of pesticides and flame retardants. It may get into water by discharge from production facilities. This chemical has been shown to damage the kidney and the stomach of laboratory animals when exposed at high levels over their lifetimes. EPA has st the drinking water standard for hexachlorocyclopentadiene at 0.05 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to hexachlorocyclopentadiene.

45. Lindane: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that lindane is a health concern at certain levels of exposure. This organic chemical is used as a pesticide. When soil and climatic conditions are favorable, lindane may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to damage the liver, kidney, nervous systems, and immune system of laboratory animals such as rats, mice and dogs exposed at high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system and circulatory system. EPA has established the drinking water standard for lindane at 0.0002 part per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to lindane.

46. Methoxychlor: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that methoxychlor is a health concern at certain levels of exposure. This organic chemical is used as a pesticide. When soil and climatic conditions are favorable, methoxychlor may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to damage the liver, kidney, nervous system, and reproductive system of laboratory animals such as rates exposed at high levels during their lifetimes. It has also been shown to produce growth retardation in rats. EPA has set the drinking water standard for methoxychlor at 0.04 part per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to methoxychlor.

47. Oxamyl: The United States Environmental Protection Agency (EPA) establishes drinking water standards and has determined that oxamyl is a health concern at certain levels of exposure. This organic chemical is used as a pesticide for the control of insects and other pests. It may get into drinking water by runoff into surface water or leaching into groundwater. This chemical has been shown to damage the kidneys of laboratory animals such as rats when exposed at high levels over their lifetimes. EPA has set the drinking water standard for oxamyl at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to oxamyl.

48. Pentachlorophenol: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that pentachlorophenol is a health concern at certain levels of exposure. This organic chemical is used a wood preservative, herbicide, disinfectant, and defoliant. It generally gets into drinking water by runoff into surface water or leaching into ground water. This chemical has been shown to produce adverse reproductive effects and to damage the liver and kidneys of laboratory animals such as rats exposed to high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the liver and kidneys. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for pentachlorophenol at 0.001 parts per million (ppm) to protect against the risk of cancer or other

adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to pentachlorophenol.

49. Picloram: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that picloram is a health concern at certain levels of exposure. This organic chemical is used as a pesticide for broadleaf weed control. It may get into drinking water by runoff into surface water or leaching into ground water as a result of pesticide application and improper waste disposal. This chemical has been shown to cause damage to he kidneys and liver in laboratory animals such as rats when the animals are exposed at high levels over their lifetimes. EPA has set the drinking water standard for picloram at 0.5 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to picloram.

50. Polychlorinated Biphenyls: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that polychlorinated biphenyls (PCBs) are a health concern at certain levels of exposure. These organic chemicals were once widely used in electrical transformers and other industrial equipment. They generally get into drinking water by improper waste disposal or leaking electrical industrial equipment. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for PCBs at 0.0005 part per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to PCBs.

51. Simazine: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that simazine is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control annual grasses and broadleaf weeds. It may leach into ground water or runs off into surface water after application. This chemical may cause cancer in laboratory animals such as rats and mice exposed at high levels during their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for simazine at 0.004 parts per million (ppm) to reduce the risk of cancer or other adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to simazine.

52. Toxaphene: The United State Environmental Protection Agency (EPA) sets drinking water standards and has determined that toxaphene is a health concern at certain levels of exposure. This organic chemical was once a pesticide widely used on cotton, corn, soybeans, pineapples and other crops. When soil and climatic conditions are favorable, toxaphene may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for toxaphene at 0.003 part per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to toxaphene.

53. 2,3,7,8-TCDD (Dioxin): The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that dioxin is a health concern at certain levels of exposure. This organic chemical is an impurity in the production of some pesticides. It may get into drinking water by industrial discharge of wastes. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed a high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for dioxin at 0.00000003 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe with respect to dioxin.

54. 2,4,5-TP.: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 2,4,5-TP is a health concern at certain levels of exposure. This organic chemical is used as a herbicide. When soil and climatic conditions are favorable, 2,4,5-TP may get into drinking water by runoff into surface water or by leaching into ground water. This chemical has been shown to damage the liver and kidney of laboratory animals such as rats and dogs exposed to high levels during their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during working careers also suffered damage to the nervous system. EPA has set the drinking water standard for 2,4,5-TP at 0.05 part per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to 2,4,5-TP.

55. 1,2,4-Trichlorobenzene: The United

States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 1,2,4-trichlorobenzene is a health concern at certain levels of exposure. This organic chemical is used as a dye carrier and as a precursor in herbicide manufacture. It generally gets into drinking water by discharges from industrial activities. This chemical has been shown to cause damage to several organs, including the adrenal glands. EPA has set the drinking water standard for 1,2,4-trichlorobenzene at 0.07 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associate with little to none of this risk and should be considered safe with respect to 1,2,4-trichlorobenzene.

56. 1,1,2-Trichloroethane: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 1,1,2-trichloroethane is a health concern at certain levels of exposure. This organic chemical is an intermediate in the production of 1,1-dichloroethylene. It generally gets into water by industrial discharge of wastes. This chemical has been shown to damage the kidney and liver of laboratory animals such as rats exposed to high levels during their lifetimes. EPA has set the drinking water standard for 1,1,2-trichloroethane at 0.005 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to 1,1,2-trichloroethane.

57. Benzene: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that benzene is a health concern at certain levels of exposure. This chemical is used as a solvent and degreaser of metals. It is also a major component of gasoline. Drinking water contamination generally results from leaking underground gasoline and petroleum tanks or improper waste disposal. This chemical has been associated with significantly increased risks of leukemia among certain industrial workers who were exposed to relatively large amounts of this chemical during their working careers. This chemical has also been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause increased risk of cancer among exposed industrial workers and in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for benzene at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

58. Carbon Tetrachloride: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that carbon tetrachloride is a health concern at certain levels of exposure. This chemical was once a popular household cleaning fluid. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for carbon tetrachloride at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

59. o-Dichlorobenzene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that o-dichlorobenzene is a health concern at certain levels of exposure. This organic chemical is used as a solvent in the production of pesticides and dyes. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, kidney and the blood cells of laboratory animals such as rats and mice exposed to high levels during their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during working careers also suffered damage to the liver, nervous system, and circulatory system. EPA has set the drinking standard for o-dichlorobenzene at 0.6 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to o-dichlorobenzene.

60. Para-dichlorobenzene: The United State Environmental Protection Agency (USEPA) sets drinking water standards and has determined that para-dichlorobenzene is a health concern at certain levels of exposure. This chemical is a component of deodorizers, moth balls and pesticides. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause liver and kidney damage in laboratory animals such as rats and mice when the animals are exposed at high levels over the lifetimes. Chemicals which cause adverse health effects in laboratory animals may also cause adverse health effects in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for Para-dichlorobenzene at 0.075 parts per million (ppm) to reduce the risk of these adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

61. 1,2-Dichloroethane: The United State Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 1,2-dichloroethane is a health concern at certain levels of exposure. This chemical is used as a cleaning fluid for fats, oils, waxes and resins. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for 1,2-dichloroethane at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

62. 1,1-Dichloroethylene: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 1,1-dichloroethylene is a health concern at certain levels of exposure. This chemical is used in industry and is found in drinking water as a result of the breakdown of related solvents. The solvents are used as cleaners and degreasers of metals and generally get into drinking water by improper waste disposal. This chemical has been shown to cause liver and kidney damage in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals which cause adverse health effects in laboratory animals may also cause adverse health effects in hgumans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinkin water standard for 1,1-dichloroethylene at 0.007 parts per million (ppm) to reduce the risk of these adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

63. Cis-1,2-Dichloroethylene: The United States Environmental Protection Agency (EPA) establishes drinking water standards and has determined that cis-1,2-dichloroethylene is a health concern at certain levels of exposure. This organic chemical is used as a solvent and intermediate in chemical production. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, nervous system, and circulatory system of laboratory animals such as rats and mice when exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. EPA has set the drinking water standard for cis-1,2-dichloroethylene at 0.07 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to cis-1,2-dichloroethylene.

64. Trans-1,2-Dichloroethylene: The United States Environmental Protection Agency (EPA) establishes drinking water standards and has determined that trans-1,2-dichloroethylene is a health concern at certain levels of exposure. This organic chemical is used as a solvent and intermediate in chemical production. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, nervous system, and the circulatory system of laboratory animals such as rats and mice when exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. EPA has set drinking water standards for trans-1,2 dichlororethylene at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to trans-1,2-dichloroethylene.

65. 1,2-Dichloropropane: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 1,2-dichloropropane is a health concern at certain levels of exposure. This organic chemical is used as a solvent and pesticide. When soil and climatic conditions are favorable, 1,2-dichloropropane may get into drinking water by runoff into surface water or by leaching into ground water. It may also get into drinking water through improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for 1,2-dichloropropane at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to 1,2-dichloropropane.

66. Ethylbenzene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined ethylbenzene is a health concern at certain levels of exposure. This organic chemical is a major component of gasoline. It generally gets into water by improper waste disposal or leaking gasoline tanks. This chemical has been shown to damage the kidney, liver, and nervous system of laboratory animals such as rats exposed to high levels during their lifetimes. EPA has set the drinking water standard for ethylbenzene at 0.7 part per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to ethylbenzene.

67. Monochlorobenzene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that monochlorobenzene is a health concern at certain levels of exposure. This organic chemical is used as a solvent. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, kidney and nervous system of laboratory animals such as rats and mice exposed to high levels during their lifetimes. EPA has set the drinking water standard for monochlorobenzene at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to monochlorobenzene.

68. Styrene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that styrene is a health concern at certain levels of exposure. This organic chemical is commonly used to make plastics and is sometimes a component of resins used for drinking water treatment. Styrene may get into drinking water from improper waste disposal. This chemical has been shown to damage the liver and nervous system in laboratory animals when exposed at high levels during their lifetimes. EPA has set the drinking water standard for styrene at 0.1 part per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to styrene.

69. Tetrachloroethylene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that tetrachloroethylene is a health concern at certain levels of exposure. This organic chemical has been a popular solvent, particularly for dry cleaning. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. EPA has set the drinking water standard for tetrachloroethylene at 0.005 part per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to tetrachloroethylene.

70. Toluene: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that toluene is a health concern at certain levels of exposure. This organic chemical is used as a solvent and in the manufacture of gasoline for airplanes. It generally gets into water by improper waste disposal or leaking underground storage tanks. This chemical has been shown to damage the kidney, nervous system, and circulatory system of laboratory animals such as rats and mice exposed to high levels during their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during working careers also suffered damage to the liver, kidney and nervous system. EPA has set the drinking water standard for toluene at 1 part per million (ppm) to protect against the risk of adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to toluene.

71. 1,1,1-Trichloroethane: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 1,1,1-trichloroethane is a health concern at certain levels of exposure. This chemical is used as a cleaner and degreaser of metals. It generally gets into drinking water by improper waste disposal. This chemical has been shown to damage the liver, nervous system and circulatory system of laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during their working careers also suffered damage to the liver, nervous system and circulatory system. Chemicals which cause adverse health effects in laboratory animals may also cause adverse health effects in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for 1,1,1-trichloroethane at 0.2 parts per million (ppm) to reduce the risk of these adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

72. Trichloroethylene: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that trichloroethylene is a health concern at certain levels of exposure. This chemical is a common metal cleaning and dry cleaning fluid. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for trichloroethylene at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

73. Vinyl Chloride: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that vinyl chloride is a

health concern at certain levels of exposure. This chemical is used in industry and is found in drinking water as a result of the breakdown of related solvents. The solvents are used as cleaners and degreasers of metals and generally get into drinking water by improper waste disposal. This chemical has been associated with significantly increased risks of cancer among certain industrial workers who were exposed to relatively large amounts of this chemical during their working careers. This chemical has also been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause increased risk of cancer among exposed industrial workers and in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The USEPA has set the enforceable drinking water standard for vinyl chloride at 0.002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

74. Xylenes: The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that xylene is a health concern at certain levels of exposure. This organic chemical is used in the manufacture of gasoline for airplanes and as a solvent for pesticides, and as a cleaner and degreaser of metals. It usually get into water by improper waste disposal. This chemical has been shown to damage the liver, kidney and nervous system of laboratory animals such as rats and dogs exposed to high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. EPA has set the drinking water standard for xylene at 10 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to xylene.

F. Public Notification for Fluoride: Notice of violations of the MCL for fluoride, notices of variances and exemptions from the MCL for fluoride, and notices of failure to comply with variance and exemption schedules for the MCL level for fluoride shall consist of the public notice prescribed in this Section, plus a description of any steps which the system is taking to come into compliance.

G. Public Notification by the State: The Division may give notice to the public required by this Section on behalf of the owner or operator of a public water system if the Division complies with the requirements of this Section. However, the owner or operator of the public water system remains legally responsible for ensuring that the requirements of this Section are met.

22.413 Frequency and Distribution of Public Notification:

A. MCL, Treatment Technique and Variance and Exemption Schedule Violations:

1. Except as provided in paragraph A.3., of this Section, the owner or operator of a public water system must give notice:

a. By publication in a daily newspaper of general circulation in the area served by the system as soon as possible, but in no case later than fourteen (14) days after the violation or failure. If the area served by the PWS is not served by a daily newspaper of general circulation, notice shall instead be given by publication in a weekly newspaper of general circulation serving the area and;

b. By mail delivery (by direct mail or with the water bill) or by hand delivery not later than forty-five (45) days after the violation or failure. The Division may waive mail or hand delivery if it determines that the owner or operator of the PWS in violation has corrected the violation or failure within the forty-five (45) day period and;

c. For violations of the MCLs of contaminants that may pose an acute risk to human health, by furnishing a copy of the notice to the radio and television stations serving the area served by the PWS as soon as possible but in no case later than seventy-two (72) hours after the violations:

1. Any violations specified by the Division as posing an acute risk to human health.

2. Violation of the MCL for nitrate as defined in and determined in Section 22.602(I)(3).

2. Except as provided in paragraph A.3., of this Section, following the initial notice given under paragraph A.1., of this Section, the owner or operator of the PWS must give notice at least once every three (3) months by mail delivery (by direct mail or with the water bill) or by hand delivery, for as long as the violation or failure exists.

3. Exceptions for community and non-community water systems are as follows:

a. In lieu of the requirements of paragraph A.1.(a) of this Section, the owner or operator of a CWS in an area that is not served by a daily or weekly newspaper of general circulation must give notice by hand delivery or by continuous posting in conspicuous places within the area served by the system. Notice by hand delivery or posting must begin as soon as possible, but no later than seventy-two (72) hours after the violation or failure for acute violations, or fourteen (14) days after the violation or failure for any other violation. Posting must continue for as long as the violation or failure exists. Notice by hand delivery must be repeated at least every three (3) months for as long as the violation or failure exists.

b. In lieu of the requirements of paragraphs A.1.(a) and A.1.(b) of this Section, the owner or operator of a NCWS may give notice by hand delivery or by continuous posting in conspicuous places within the area served by the system. Notice by hand delivery or posting

must begin as soon as possible, but no later than seventy-two (72) hours after the violation or failure for acute violations, or fourteen (14) days after the violation or failure for any other violation. Posting must continue for as long as the violation or failure exists. Notice by hand delivery must be repeated at least every three (3) months for as long as the violation or failure exists.

B. Notification to New Billing Units: The owner or operator of a PWS must give a copy of the most recent public notice for any outstanding violation of any MCL, or any treatment technique requirement, or any variance or exemption schedule to all new billing units or new hookups prior to or at the time service begins.

C. Monitoring, Testing Procedure, Variances and Exemptions: The owner or operator of a PWS which fails to perform required monitoring, fails to comply with a testing procedure, or is subject to a variance or exemption shall notify persons served by the system as follows:

1. Except as provided in paragraph C.3. or C.4. of this Section, the owner or operator of a PWS must give notice within three (3) months of the violation or granting of a variance or exemption by publication in a daily newspaper of general circulation in the area served by the system. If the area served by the PWS is not served by a daily newspaper of general circulation, notice shall instead be given by publication in a weekly newspaper of general circulation serving the area.

2. Except as provided in paragraph C.3 or C.4 of this Section, following the initial notice given under paragraph C.1. of this Section, the owner or operator of the PWS must give notice at least once every three months by mail delivery (by direct mail or with water bill) or by hand delivery, for as long as the violation exists. Repeat notice of the existence of a variance or exemption must be given every three months for as long as the variance or exemption remains in effect.

3. Exceptions for community and non-community water systems are as follows:

a. In lieu of the requirements of paragraph C.1. or C.2. of this Section, the owner or operator of a CWS in an area that is not served by a daily or weekly newspaper of general circulation must give notice, within three (3) months of the violation or granting of the variance or exemption, by hand delivery or by continuous posting in conspicuous places within the area served by the system. Posting must continue for as long as the violation exists or a variance or exemption remains in effect. Notice by hand delivery must be repeated at least every three (3) months for as long as the violation exists or a variance or exemption remains in effect.

b. In lieu of the requirements of paragraphs A.1.(a.) and A.1.(b) of this Section, the owner or operator of a NCWS may give notice within three (3) months of the violation or the granting of a variance or exemption, by hand delivery or by continuous posting in conspicuous places within the area served by the system. Posting must continue for as long as the violation exists or a variance or exemption remains in effect. Notice by hand delivery must be repeated at least every three (3) months for as long as the violation exists or a variance or exemption remains in effect.

4. In lieu of the requirements of paragraphs C.1., C.2. and C.3. of this Section, the owner or operator of a PWS, at the discretion of the Division, may provide less frequent notice for minor monitoring violations as defined by the Division, if EPA has approved the Division's application for a program revision.

D. All posted public notices shall remain readable and be protected by glass, plastic or some other suitable covering and remain in place until such time that the violation or failure has terminated.

E. Notice to the public required by this Section may be given by the Division should the water supplier fail to do so.

F. Nothing in this Section shall limit the authority of the **[~~State Board of Health~~][Secretary, Health and Social Services]** to require notification by newspaper and to radio and television stations when circumstances make more immediate or broader notice appropriate to protect the public's health.

G. All community and non-community water suppliers shall submit to the Division, within ten (10) days of the completion of issuance of public notification, a representative copy of each type of notice distributed, published, posted and/or made available to the person served by the system and/or to the media.

22.414 Public Notification Requirements Pertaining to Lead

A. Applicability of Public Notification Requirements

1. Except as provided in paragraph A.2. of this Section, by June 19, 1988, the owner or operator of each CWS and each NTNCWS shall issue notice to persons served by the system that may be affected by lead contamination of their drinking water. The Division may require subsequent notices. The owner or operator shall provide notice under this Section even if there is no violation of the national primary drinking water regulation for lead.

2. Notice under paragraph A.1. of this Section is not required if the system demonstrates to the Division that the water system, including the residential and non-residential portions connected to the water system, are lead free. For the purposes of this paragraph, the term "lead free" when used with respect to solders and flux refers to solder and flux containing not more than 0.2 percent lead, and when used with respect to pipes and pipe fittings, refers to pipes and pipe fittings containing not more than 8.0 percent lead.

3. The owner shall review, correct and

complete the public notice and return it to the Division within seventy-two (72) hours with approval noted.

B. Manner of Notification

1. Notice shall be given to persons served by the PWS either by:

a. Three newspaper notices one (1) for each of three (3) consecutive months and the first no later than June 19, 1988) or;

b. Once by mail notice with the water bill or in a separate mailing by June 19, 1988 or;

c. Once by hand delivery by June 19, 1988.

2. For NTNCWS, notice may be given by continuous posting. If posting is used, the notice shall be posted in a conspicuous place in the area served by the system and start no later than June 19, 1988, and continue for three (3) months.

C. General Content of Notice

1. Notices issued under this Section shall provide a clear and readily understandable explanation of the potential sources of lead in drinking water, potential adverse health effects, reasonable available methods of mitigating known or potential lead content in drinking water, any steps the water system is taking to mitigate lead content in drinking water and the necessity for seeking alternative water supplies, if any. Use of the mandatory language in paragraph D. of this Section in the notice will be sufficient to explain potential adverse health effects.

2. Each notice shall also include specific advice on how to determine if materials containing lead have been used in homes or the water distribution system and how to minimize exposure to water likely to contain high levels of lead. Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar problems that frustrate the purpose of the notice. Each notice shall contain the telephone number of the owner, operator or designee of the PWS as a source of additional information regarding the notice. Where appropriate, the notice shall be multi-lingual.

D. Mandatory Heath Effects Information: When providing the information in public notices required under paragraph C of this Section on the potential adverse health effects of lead in drinking water, the owner or operator of the water system shall include the following mandatory language specific to lead.

1. Lead: The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that lead is a health concern at certain levels of exposure. There is currently a standard of 0.020 parts per million (ppm). Part of the purpose of this notice is to inform you of the potential adverse health effects of lead. This is being done even though your water may not be in violation of the current standard. The USEPA and others are concerned about lead in drinking water. Too much lead in the human body can cause serious damage to the brain, kidneys, nervous system and red blood cells. The greatest risk, even with short-term exposure, is to young children and pregnant women. Lead levels in your drinking water are likely to be highest:

* if your home or water system has lead pipes, or
* if your home has copper pipes with lead solder, and
* if the home is less than five (5) years old
* if you have soft or acidic water, or
* if water sits in the pipes for several hours.

22.415 Public Notification Requirements Pertaining to VOCs: If a CWS or NTNCWS fails to comply with an applicable MCL level established under Section 22.611, or fails to comply with requirements of any schedule prescribed pursuant to a variance or exemption, the water supplier shall notify persons served by the system as provided in Section 22.413.

22.416 Public Notification Requirements Pertaining to Unregulated Contaminants: The owner or operator shall notify persons served by the system of the availability of the results of sampling conducted under Section 26.62 by including a notice in the first set of water bills issued by the system after the receipt of the results or written notice within three months. The notice shall identify a person and supply the telephone number contact for information on monitoring results. For surface water systems, public notification is required only after the first quarter's monitoring for unregulated contaminants, with a statement that monitoring will be conducted for three (3) more quarters with the results available upon request.

22.417 Procedures for Issuance of a Public Notice

A. PMCL Violation:

1. Upon notification that a condition exists as indicated in Section 22.411A., the Division shall prepare a notice in accordance with Section 22.412 and a draft public notice for use in public notification by the water supply owner.

2. As soon as possible, but in no case more than seventy-two (72) hours, the Division shall forward the notice and draft notice to the water supply owner.

3. The owner shall review, correct and complete the public notice and return it to the Division within seventy-two (72) hours with approval noted.

4. The Division shall resolve any discrepancies and approve the public notice until as rapidly as possible and retain the public notice until the final confirmation sample results are received.

5. Upon receipt of the confirmation sampling results, the Division shall determine if a public notice is warranted and shall return the approved public notice to the owner for appropriate public notification.

B. Other Violations or Circumstances Requiring Public Notification:

1. Upon notification that a condition exists as

indicated in Section 22.411B. and 22.411C., the Division shall initiate the preparation of a draft public notice and notice if appropriate.

2. As soon as possible, but in no case more than seventy-two (72) hours, the Division shall forward a copy of the draft public notice with attached notice, if applicable, to the water supply owner.

3. The owner shall review, correct and complete the public notice and return it to the Division within seventy-two (72) hours with approval noted.

4. The Division shall resolve any discrepancies and approve the public notice as rapidly as possible.

5. The Division shall then return the approved public notice to the owner for appropriate public notification.

22.42 Record Maintenance:

22.421 Retaining Records: Effective upon the adoption of these Regulations, any owner or operator of a PWS shall accumulate and make available to the Division within the time stated the following records which shall be retained on the premises or at a convenient location:

A. Bacteriological analyses of records for not less than the previous five (5) years.

B. Chemical analyses records for not less than the previous ten (10) years.

C. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

1. The date, place and time of sampling and the name of the person who collected the sample;

2. Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample;

3. Date of analysis;

4. Laboratory and person responsible for performing analysis;

5. The analytical technique/method used and;

6. The results of the analysis.

D. Records of action taken by the system to correct violations of PMCL regulations shall be kept for a period not less than three (3) years after the last action taken with respect to the particular violation involved.

E. Reports, summaries and communications relating to sanitary surveys shall be kept for a period not less than ten (10) years after completion of the sanitary survey of the system conducted by the system itself, by a private consultant or by any local, State or Federal agency.

F. Records concerning a variance or exemption shall be kept for a period ending not less than five (5) years following the expiration of such variance or exemption.

22.422 Records Kept by Division: Records of microbiological analyses of repeat or special samples shall be retained for not less than one (1) year in the form of actual laboratory reports or in an appropriate summary form. Records of each of the following decisions made pursuant to the total coliform provisions shall be made in writing and retained by the Division.

A. Records of the following decisions must be retained for five (5) years:

1. Any decision to waive the twenty-four (24) hour time limit for collecting repeat samples after a total coliform positive routine sample if the public water system has a logistical problem in collecting the repeat sample that is beyond the system's control, and what alternative time limit the system must meet.

2. Any decision to allow a system to waive the requirement for five (5) routine samples the month following a total coliform-positive sample. If the waiver decision is made, the record of the decision must contain all items listed in that paragraph.

3. Any decision to invalidate a total coliform-positive sample. If the decision to invalidate a total coliform positive sample is made, the record of the decision must contain all the items in that paragraph.

B. Records of each of the following decisions must be retained in such a manner so that each system's current status may be determined:

1. Any decision to reduce the total coliform monitoring frequency for a CWS serving one thousand (1000) persons or fewer, that has no history of total coliform contamination in its current configuration and had a sanitary survey conducted within the last five (5) years showing that the system is supplied solely by a protected ground water source and is free of sanitary defects, to less than once per month and what the reduced monitoring frequency is. A copy of the reduced monitoring frequency must be provided to the system.

2. Any decision to reduce the total coliform monitoring frequency for a NCWS using only ground water and serving one thousand (1000) persons or fewer to less than once per quarter, and what the reduced monitoring frequency is. A copy of the reduced monitoring frequency must be provided to the system.

3. Any decision to reduce the total coliform monitoring frequency for a NCWS using only ground water and serving more than one thousand (1000) persons during any month the system serves one thousand (1000) persons or fewer. A copy of the reduced monitoring frequency must be provided to the system.

4. Any decision to waive the twenty-four hour limit for taking a total coliform sample for a PWS which uses surface water, or ground water under the influence of surface water, and which does not practice filtration, and which measures a source water turbidity level exceeding one (1) NTU near the first service connection.

5. Any decision that a NCWS is using only protected and disinfected ground water and therefore may reduce the frequency of its sanitary survey to less than once every five (5) years and what that frequency is. A copy of the reduced frequency must be provided to the system.

6. A list of agents other than the Division, if any, approved by the Division to conduct sanitary surveys.

7. Any decision to allow a PWS to forgo fecal coliform or E. coli testing on a total coliform positive sample if that system assumes that the total coliform positive sample is fecal coliform positive or E. coli positive.

22.5 MICRO-BIOLOGICAL REQUIREMENTS:

22.50 Sampling:

22.501 Sampling Sites: Compliance with bacteriological requirements of these Regulations shall be based on examinations of samples collected at sites which are representative of water throughout the distribution system according to a written sample siting plan. These plans are subject to Division review and revision.

22.502 CWS Sampling Frequency: The supplier of water for a CWS shall sample for total coliform bacteria at least monthly in numbers proportional to the population served by the system in accordance with the following:

Population Served	Number of Samples Per Month
25-1,000	1
1,001-2,500	2
2,501-3,300	3
3,301-4,100	4
4,101-4,900	5
4,901-5,800	6
5,801-6,700	7
6,701-7,600	8
7,601-8,500	9
8,501-12,900	10
12,901-17,200	15
17,201-21,500	20
21,501-25,000	25
25,001-33,000	30
33,001-41,000	40
41,001-50,000	50
50,001-59,000	60
59,001-70,000	70
70,001-83,000	80
83,001-96,000	90
96,001-130,000	100
130,001-220,000	120

22.503 Reduced Monitoring Frequency for CWSs: If a CWS serving twenty-five (25) to one thousand (1000) persons has no history of total coliform contamination in its current configuration and a sanitary survey conducted in the past five (5) years shows that the system is supplied solely by a protected ground water source and is free of sanitary defects, the Division may reduce the monitoring frequency specified above, except that in no case may the Division reduce the monitoring frequency to less than one (1) sample per quarter. The Division must approve the reduced monitoring frequency in writing.

22.504 NCWS Sampling Frequency: The supplier of water for a NCWS and NTNCWS shall sample for total coliform bacteria in accordance with the following:

A. A NCWS and NTNCWS using only ground water (except ground water under the direct influence of surface water) and serving one thousand (1000) persons or fewer must monitor each calendar quarter that the system provides water to the public, except that the Division may reduce this monitoring frequency, in writing, if a sanitary survey shows that the system is free of sanitary defects. Beginning June 29, 1994 the Division cannot reduce the monitoring frequency for a NCWS using only ground water (except ground water under the direct influence of surface water) and serving one thousand (1000) persons or fewer to less than once per year.

B. A NCWS and NTNCWS using only ground water (except ground water under the direct influence of surface water) and serving more than one thousand (1000) persons during any month must monitor at the same frequency as a like-sized CWS, as specified in Section 22.502, except the Division may reduce this monitoring frequency, in writing, for any month the system serves one thousand (1000) persons or fewer. The Division cannot reduce the monitoring frequency to less than once per year. For systems using ground water under the direct influence of surface water, Section 22.504D applies.

C. A NCWS and NTNCWS using surface water, in total or in part, must monitor at the same frequency as a like-sized CWS, as specified in Section 22.502, regardless of the number of persons it serves.

D. A NCWS and NTNCWS using ground water under the direct influence of surface water must monitor at the same frequency as a like-sized CWS, as specified in Section 22.502. The system must begin monitoring at this

frequency beginning six (6) months after the Division determines that the ground water is under the direct influence of surface water.

22.505 Special Sampling for Surface Water Systems: A PWS that uses surface water or ground water under the direct influence of surface water, and does not practice filtration in compliance with Section 22.1004, must collect at least one (1) sample near the first service connection each day the turbidity level of the source water, measured as specified in Section 22.702, exceeds one (1) NTU. This sample must be analyzed for the presence of total coliforms. When one (1) or more turbidity measurements in any day exceed one (1) NTU, the system must collect this coliform sample within twenty-four (24) hours of the first exceedance, unless the Division determines that the system, for logistical reasons outside the system's control, cannot have the sample analyzed within thirty (30) hours of collection. Sample results from this coliform monitoring must be included in determining the MCL for total coliforms.

22.506 Monthly/Quarterly Sampling: The PWS must collect samples at regular time intervals throughout the month/quarter, except that a system that uses ground water (except ground water under the direct influence of surface water) and serves 4,900 persons or fewer, may collect all required samples on a single day if they are taken from different sites.

22.507 Special Purpose Samples: Special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, shall not be used to determine compliance with the MCL for total coliforms. Repeat samples taken pursuant to Section 22.513 are not considered special purpose samples, and must be used to determine compliance with the MCL for total coliforms.

22.51 Microbiological MCLs

22.511 Total Coliforms, Fecal Coliforms and E. coli: The MCLs for microbiological contaminants are in accordance with the following:

A. When any approved analytical methodology from Section 22.52 is used, compliance with the MCL is based on the presence or absence of total coliforms in a sample, rather than coliform density in accordance with the following:

1. For a system which collects at least forty (40) samples per month/quarter, if no more than 5.0 percent of the samples collected during a month/quarter are total coliform-positive, the system is in compliance with the MCL for total coliforms.

2. For a system which collects fewer than forty (40) samples per month/quarter, if no more than one (1) sample collected during a month/quarter is total coliform-positive, the system is in compliance with the MCL for total coliforms.

B. Any fecal coliform-positive repeat sample, or E. coli-positive repeat sample, or any total coliform-positive repeat sample following a fecal coliform-positive or E. coli-positive routine sample constitutes a violation of the MCL for total coliforms. For purposes of the public notification requirements in Section 22.41, this is a violation that may pose an acute risk to health.

C. A PWS must determine compliance with the MCL for total coliforms in accordance with the above for each month/quarter in which it is required to monitor for total coliforms.

D. The Division hereby identifies the following as the BAT, treatment techniques, or other means available for achieving compliance with the MCL for total coliforms above:

1. Protection of wells from contamination by coliforms by appropriate placement and construction;

2. Maintenance of a disinfectant residual throughout the distribution system;

3. Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, and continual maintenance of positive water pressure in all parts of the distribution system;

4. Filtration and/or disinfection of surface water, or disinfection of ground water using strong oxidants such as chlorine, chlorine dioxide, or ozone.

5. The development of an EPA-approved State Wellhead Protection Program under Section 1428 of the Safe Drinking Water Act (SDWA).

22.512 Invalidation of Total Coliform-Positive Samples: Each total coliform positive sample counts in compliance calculations, unless it has been invalidated by the Division. Invalidated samples do not count toward the minimum monitoring frequency. The Division may invalidate a sample if:

A. The analytical laboratory acknowledges that improper sample analysis caused the positive result;

B. A laboratory must invalidate a total coliform sample (unless total coliforms are detected) if the sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined (e.g. the Multiple-Tube Fermentation Technique), produces a turbid culture in the absence of an acid reaction in the Presence-Absence (P-A) Coliform Test, or exhibits confluent growth or produces colonies too numerous too count with an analytical method using a membrane filter (e.g. Membrane Filter Technique). If a laboratory invalidates a sample because of such interference, the system must collect another sample from the same location as the original sample within twenty-four (24) hours of being notified of the interference problem, and have it analyzed for the presence of total coliforms. The system must continue to

re-sample within twenty-four (24) hours and have the samples analyzed until it obtains a valid result. The Division may waive the twenty-four (24) hour time limit on a case-by-case basis.

C. The system determines that the contamination is a domestic or other non-distribution system plumbing problem on the basis that one (1) or more repeat samples taken at the same tap as the original total coliform positive sample is total coliform positive, but all repeat samples at nearby sampling locations that are within five (5) service connections of the original tap are total coliform negative. A total coliform-positive sample cannot be invalidated under this provision if the PWS has only one (1) service connection; or

D. The Division has substantial grounds to believe that a total coliform positive result is due to some circumstance or condition which does not reflect water quality in the distribution system, if:

1. The basis for this determination is documented in writing.

2. This document is signed and approved by the Division.

3. The documentation is made available to EPA and the public. The written documentation must state the specific cause of the total coliform-positive sample, and what action the system has taken, or will take, to correct this problem.

The system must still collect all repeat samples required under Section 22.513 to determine compliance with the MCL for total coliforms in Section 22.511.

22.513 Repeat Monitoring: When a total coliform-positive sample result is obtained, repeat sampling must be done in accordance with the following:

A. If a routine sample is total-coliform positive, the PWS must collect a set of repeat samples within twenty-four (24) hours of being notified of the positive result. A system which collects more than one (1) routine sample/ month must collect no fewer than three (3) repeat samples for each total coliform positive sample found. A system which collects one (1) routine sample/month or fewer must collect no fewer than four (4) repeat samples for each total coliform positive sample found. The Division may extend the twenty-four (24) hour limit on a case-by-case basis if the system has a logistical problem in collecting the repeat samples within twenty-four hours that is beyond its control. In the case of an extension, the Division must specify how much time the system has to collect the repeat samples.

B. The system must collect at least one (1) repeat sample from the sampling tap where the original total coliform-positive sample was taken, and at least one (1) repeat sample at a tap within five (5) service connections upstream and at least one (1) repeat sample at a tap within five (5) service connections downstream of the original sampling site. If a total coliform-positive sample is at the end of the distribution system, or one (1) away from the end of the distribution system, the Division may waive the requirement to collect at least one (1) repeat sample upstream or downstream of the original sampling site.

C. The system must collect all repeat samples on the same day, except that the Division may allow a system with a single service connection to collect the required set of repeat samples over a four (4) day period or to collect a larger volume repeat sample(s) in one (1) or more sample containers of any size, as long as the total volume collected is at least four hundred (400) mL [three hundred (300) mL for systems which collect more than one (1) routine sample/ month].

D. If one (1) or more repeat samples in the set is total coliform-positive, the PWS must collect an additional set of repeat samples in the manner specified in paragraphs A, B, and C of this Section. The additional samples must be collected within twenty-four (24) hours of being notified of the positive result, unless the Division extends the limit as provided in paragraph A of this Section. The system must repeat this process until either total coliforms are not detected in one (1) complete set of repeat samples or the system determines that the MCL for total coliforms in Section 22.511 has been exceeded and notifies the Division.

E. If a system collecting fewer than five (5) routine samples per month has one (1) or more total coliform-positive samples and the Division does not invalidate the sample(s) under Section 22.512, it must collect at least five (5) routine samples during the next month the system provides water to the public, except that the Division may waive this requirement if the conditions of paragraphs E1 and E2 are met. The Division cannot waive the requirement for a system to collect repeat samples in paragraphs A, B, C, and D of this Section.

1. The Division may waive the requirements to collect five (5) routine samples the next month the system provides water to the public if the Division, or an agent approved by the Division, performs a site visit before the end of the next month the system provides water to the public. Although a sanitary survey need not be performed, the site visit must be sufficiently detailed to allow the Division to determine whether additional monitoring and/or any corrective action is needed. The Division cannot approve an employee of the system to perform the site visit, even if the employee is an agent approved by the Division to perform sanitary surveys.

2. The Division may waive the requirements to collect five (5) routine samples the next month the system provides water to the public if the Division has determined why the sample was total coliform-positive and establishes that the system has corrected the problem or will correct the problem before the end of the next month the system serves water to the public. In this case, the Division must document this decision to waive the following months's additional

monitoring requirement in writing, have it approved and signed by the supervisor of the Division official who recommends such a decision, and make this document available to the EPA and the public. The written documentation must describe the specific cause of the total coliform-positive sample and what action the system has taken and/or will take to correct this problem. The Division cannot waive the requirement to collect five (5) routine samples the next month the system provides water to the public solely on the grounds that all coliform samples are total coliform-negative. Under this paragraph, a system must still take at least one (1) routine sample before the end of the next month it serves water to the public and use it to determine compliance with the MCL for total coliforms in Section 22.511, unless the Division has determined that the system has corrected the contamination problem before the system took the set of repeat samples required in paragraphs A, B, C, and D of this Section, and all repeat samples were total coliform negative.

F. After a systems collects a routine sample and before it learns the results of the analysis of that sample, if it collects another routine sample(s) from within five (5) adjacent service connections of the initial sample, and the initial sample, after analysis, is found to contain total coliforms, then the system may count the subsequent sample(s) as a repeat sample instead of a routine sample.

G. Results of all routine and repeat samples not invalidated by the Division must be included in determining compliance with the MCL for total coliforms in Section 22.511.

22.514 Initial/Subsequent Sanitary Surveys: PWSs which do not collect five (5) or more routine samples/month must undergo an initial sanitary survey by June 29, 1994 for CWSs and June 29, 1999 for NCWSs. Thereafter, systems must undergo another sanitary survey every five (5) years, except that NCWSs using only protected and disinfected ground water, as defined by the Division, must undergo subsequent sanitary surveys at least every ten (10) years after the initial sanitary survey. The Division must review the results of each sanitary survey to determine whether the existing monitoring frequency is adequate and what additional measures, if any, the system needs to undertake to improve drinking water quality. In conducting a sanitary survey of a system using ground water in a State having an EPA-approved wellhead protection program under Section 1428 of the SDWA, information on sources of contamination within the delineated wellhead protection area that was collected in the course of developing and implementing the program should be considered instead of collecting new information, if the information was collected since the last time the system was subject to a sanitary survey. Sanitary surveys must be performed by the Division and the system is responsible for ensuring the survey takes place.

22.515 Fecal Coliforms/Escherichia coli (E. coli) Testing: When a total coliform-positive sample result is obtained, the sample must be analyzed for fecal coliforms or E. coli in accordance with the following:

A. If any routine or repeat sample is total coliform- positive, the system must analyze that total coliform-positive culture medium to determine if fecal coliforms are present, except that the system may test for E. coli in lieu of fecal coliforms. If fecal coliforms or E. coli are present, the system shall notify the Division by the end of the day when the system is notified of the test result, unless the system is notified of the result after the Division office is closed, in which case the system shall notify the Division before the end of the next business day.

B. The Division has the discretion to allow the PWS, on a case by case basis, to forgo fecal coliform or E. coli testing on a total coliform-positive sample if that system assumes that the total coliform-positive sample is fecal coliform-positive or E. coli positive. Accordingly, the system shall notify the Division as specified in paragraph A of this Section and the provisions of Section 22.511B apply.

22.516 Response to Violation: A PWS which has exceeded the MCL for total coliforms in Section 22.511 must report the violation to the Division no later than the end of the next business day after it learns of the violation, and notify the public in accordance with Section 22.41. A PWS which has failed to comply with a coliform monitoring requirement, including the sanitary survey requirement, must report the monitoring violation to the Division within ten (10) days after the system discovers the violation, and notify the public in accordance with Section 22.41.

22.52 ANALYTICAL REQUIREMENTS

22.521 Analytical Methodology: The standard sample volume required for total coliform analysis, regardless of analytical method used, is one hundred (100) ml. Public water systems need only determine the presence or absence of total coliforms. A determination of total coliform density is not required. Public water systems must conduct total coliform analyses in accordance with one (1) of the following analytical methods:

A. Membrane Filter Technique: As set forth in Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., 16th edition, Method 909, 909A, and 909B - pp. 8886-896; or Microbiological Methods for Monitoring the Environment, Water and Wastes, USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45628 (EPA-600/8-78-017, December 1978, available from ORD Publications, CERI, USEPA Cincinnati, Ohio 45268), Part III, Section B.2.1-2.6, pp. 108-112.

B. Multiple Tube Fermentation (MTF) Technique: As set forth in Standard Methods for the Examination of Water and Wastewater, 1985, American

Public Health Association et al., 16th edition, Method 908, 908A, and 908B - pp. 870-878, except that 10 fermentation tubes must be used; or Microbiological Methods for Monitoring the Environment, Water and Wastes, USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45628 (EPA-600/8-78-017, December 1978, available from ORD Publications, CERI, USEPA Cincinnati, Ohio 45268), Part III, Section B.4.1-4.6.4, pp. 114-118 (Most Probable Number Method) except that 10 fermentation tubes must be used. NOTE- In lieu of the 10 tube MTF Technique specified in paragraph A above, a public water system may use the MTF Technique using either five (5) tubes (20 ml sample portions) or a single culture bottle containing a culture medium for the MTF Technique, i.e. lauryl tryptose broth (formulated as described in Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., 16th edition, Method 908A-pp. 872), as long as a 100 ml water sample is used in the analysis.

C. Minimal Medium ONPG-MUG (MMO-MUG) Test: As set forth in the article "National Field Evaluation of a Defined Substrate Method for the Simultaneous Detection of Total Coliforms and Escherichia coli from Drinking Water: Comparison with Presence-Absence Techniques" (Edberg et al.), Applied and Environmental Microbiology, Volume 55, pp. 1003-1008, April 1989. (Note: The MMO-MUG Test) is sometimes referred to as the Autoanalysis Colilert System).

D. Fecal Coliform Test: PWSs must conduct fecal coliform analysis in accordance with the following procedure. When the MTF Technique or Presence-Absence (P-A) Coliform Test is used to test for total coliforms, shake the lactose-positive presumptive tube or P-A bottle vigorously and transfer the growth with a sterile three (3) mm loop or sterile applicator stick into brilliant green lactose bile broth and EC medium to determine the presence of total and fecal coliforms, respectively. For EPA approved analytical methods which use a membrane filter, remove the membrane containing the total coliform colonies from the substrate with a sterile forceps and carefully curl and insert the membrane into a tube of EC medium. (The laboratory may first remove a small portion of selected colonies for verification.) Alternatively, swab the entire membrane filter surface with a sterile cotton swab and transfer the swab to the EC medium. (The cotton swab should not be left in the EC medium.) Gently shake the inoculated tube of EC medium to insure adequate mixing and incubate in a waterbath at 44.5 $\pm$ 0.2 C for twenty-four (24) $\pm$ 2 hours. Gas production of any amount in the inner fermentation tube of the EC medium indicates a positive fecal coliform test. The preparation of EC medium is described in Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 16th edition, Method 908C-pp.879, paragraph 1a. PWSs need only determine the presence or absence of fecal coliforms. A determination of fecal coliform density is not required.

SECTION 22.6 INORGANIC AND ORGANIC CHEMICAL REQUIREMENTS

22.60 INORGANIC CHEMICAL REQUIREMENTS

22.601 PMCLs AND SMCLs: The following are the inorganic PMCLs and SMCLs (mg/L - milligrams per liter). Compliance is determined pursuant to Section 22.602.

A. PMCLs

Substance	MCL
Antimony (Sb)	0.006 mg/L
Arsenic (As)	0.05 mg/L
Asbestos	7 MF/L
Barium (Ba)	2 mg/L
Beryllium (Be)	0.004 mg/L
Cadmium (Cd)	0.005 mg/L
Chromium (Cr)	0.1 mg/L
Cyanide (Cn)	0.2 mg/L
Fluoride (F)	See Section 22.603
Lead (Pb)	0.02 mg/L
Mercury (Hg)	0.002 mg/L
Nickel (Ni)	0.1 mg/L
Nitrate-Nitrogen (NO3-N)	10 mg/L (See Section 22.602 I3)
Nitrite-Nitrogen (NO-N)	1 mg/L
Total Nitrate Nitrogen and Nitrite Nitrogen	10 mg/L
Selenium (Se)	0.05 mg/L
Thallium (Tl)	0.002 mg/L
Turbidity	See Section 22.701

*MFL - million fibers per liter, with fiber length > 10 microns

B. SMCLs

Substance	MCL
Aluminum	0.05-0.2 mg/L
Chloride (Cl)	250 mg/L
Color	15 color units

Copper (Cu)	1 mg/L
Corrosivity	Noncorrosive (See Section22.71)
Foaming Agents	0.50 mg/L
Iron (Fe)	0.30 mg/L
Manganese (Mn)	0.05 mg/L
Odor	3 threshold odor number
pH	6.5 - 8.5
Silver	0.1 mg/L
Sulfate (SO4)	250 mg/L
Total Dissolved Solids (TDS)	500 mg/L
Zinc (Zn)	5 mg/L

~~C. The following maximum contaminant level for cadmium, chromium, mercury, nitrate, and selenium shall remain effective until July 30, 1992.~~

~~Cadmium~~	~~0.01 mg/L~~
~~Chromium~~	~~0.05 mg/L~~
~~Mercury~~	~~0.002 mg/L~~
~~Nitrate~~	~~10.0 mg/L~~
~~Selenium~~	~~0.01 mg/L~~

~~1. The following maximum contaminant level for lead shall remain effective until December 7, 1992.~~

~~Lead0.05 mg/L~~

C.~~D.~~ The Maximum Contaminant Level Goals (MCLG) for lead and copper are as follows:

Lead	0 mg/L
Copper	1.3 mg/L

22.602 SAMPLING AND ANALYTICAL REQUIREMENTS: Community water systems shall conduct monitoring to determine compliance with the maximum contaminant levels specified in Section 22.601 in accordance with this section. Non-transient, non-community water systems shall conduct monitoring to determine compliance with the maximum contaminant levels specified in Section 22.601 in accordance with this section. Transient, non-community water systems shall conduct monitoring to determine compliance with the nitrate and nitrite maximum contaminant levels in Section 22.601 in accordance with this section.

A. Monitoring shall be conducted as follows:

1. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment [hereafter called a sampling point] beginning in the compliance period starting January 1, 1993. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

a. Groundwater systems with 150 or more service connections shall begin monitoring for Phase II and Phase V contaminants on January 1, 1993.

b. Groundwater systems with less than 150 service connections shall begin monitoring for Phase II contaminants on January 1, 1993 and for Phase V contaminants on January 1, 1996.

2. Surface water systems shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment [hereafter called a sampling point] beginning in the compliance period beginning January 1, 1993. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

NOTE: FOR PURPOSES OF THIS PARAGRAPH, SURFACE WATER SYSTEMS INCLUDE SYSTEMS WITH A COMBINATION OF SURFACE AND GROUND SOURCES.

a. Surface water systems with 150 or more service connections shall begin monitoring for Phase II and Phase V contaminants on January 1, 1993.

b. Surface water systems with less than 150 service connections shall begin monitoring for Phase II contaminants on January 1, 1993 and for Phase V contaminants on January 1, 1996.

3. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

4. The Division may reduce the total number

of samples which must be analyzed by allowing the use of compositing. Composite samples from a maximum of five sampling points are allowed provided that the detection limit of the method used for analysis is less than one-fifth of the MCL. Compositing of samples must be done in the laboratory.

a. If the concentration in the composite sample is greater than or equal to one-fifth of the MCL of any inorganic chemical, then a follow-up sample must be taken within 14 days at each sampling point included in the composite. These samples must be analyzed for the contaminants which exceeded one-fifth of the MCL in the composite sample. Detection limits for each analytical method are the following:

DETECTION LIMITS FOR INORGANIC CONTAMINANTS

Contaminants	MCL (mg/L)	Method	Detection Limit (mg/L)
Antimony	0.006	Atomic Absorption furnace CP-Mass Spectrometry Hydride-Atomic Absorption	0.003 0.00086 0.0004 0.001
Asbestos	7MFL2	Transmission Electron Microscopy	0.01 MFL
Barium	2	Atomic Absorption furnace Technique Atomic Absorption direct aspiration	0.002 0.1
		Inductively Coupled Plasma	0.002 (0.001)1
Beryllium	0.004	Atomic Absorption furnace xl Inductively Coupled Plasma3 ICP-Mass Spectrometry	0.0002 0.000026 0.0003 0.0003
Cadmium	0.005	Atomic Absorption furnace Technique Inductively Coupled Plasma	0.0001 0.0011
Chromium	0.1	Atomic Absorption furnace Technique Inductively Coupled Plasma	0.001 0.007 (0.001)1
Cyanide	0.2	Distillation, Spectrophotometric4 Distillation, Automated, Spectrophotometric4 Distillation, Selective Electrode4 Distillation, Amenable Spectrophotometric5	 0.02 0.005 0.05 0.02
Mercury	0.002	Manual Cold Vapor Technique Automated Cold Vapor Technique	0.0002 0.0002
Nickel	0.1	Atomic Absorption furnace Inductively Coupled Plasma3 ICP-Mass Spectrometry	0.001 0.00066 0.005 0.0005
Nitrate	10	Manual Cadmium Reduction Automated Hydrazine Reduction Automated Cadmium Reduction Ion Selective Electrode Ion Chromatography	0.01 0.01 0.05 1 0.01
Nitrite	1	Spectrophotometric Automated Cadmium Reduction Manual Cadmium Reduction Ion Chromatography	0.01 0.05 0.01 0.004
Selenium	0.05	Atomic Absorption furnace Atomic Absorption gaseous hydride	0.002 0.002
Thallium	0.002	Atomic Absorption furnace ICP-Mass Spectrometry	0.001 0.00076 0.0003

1. Using concentration technique in Appendix A to EPA Method 200.7.
2. MFL = million fibers per liter > 10 um.
3. Using a 2X Preconcentration step as noted in Method 200.7. Lower MDLs may be achieved when using a 4X preconcentration.
4. Screening method for total cyanides.
5. Measures "free" cyanides.
6. Lower MDLs are reported using stabilized temperature graphite furnace atomic absorption.

b. If the population served by the system is >3,300 persons, then compositing may only be permitted by the Division at sampling points within a single system. In systems serving <3,300 persons, the State may permit compositing among different systems provided the 5-sample limit is maintained.

c. If duplicates of the original sample taken from each sampling point used in the composite are available, the system may use these instead of resampling. The duplicates must be analyzed and the results reported to the Division within 14 days of collection

5. The frequency of monitoring for asbestos shall be in accordance with paragraph (B) of this section; the frequency of monitoring for antimony, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, and thallium shall be in accordance with paragraph (C) of this section; the frequency of monitoring for nitrate shall be in accordance with paragraph (D) of this section; and the frequency of monitoring for nitrite shall be in accordance with paragraph (E) of this section.

B. The frequency of monitoring conducted to determine compliance with the maximum contaminant level for asbestos specified in Section 22.601 shall be conducted

as follows:

1. Each community and non-transient, non-community water system is required to monitor for asbestos during the first three-year compliance period of each nine-year compliance cycle beginning in the compliance period starting January 1, 1993.

2. If the system believes it is not vulnerable to either asbestos contamination in its source water or due to corrosion of asbestos-cement pipe, or both, it may apply to the Division for a waiver of the monitoring requirement in paragraph (B1) of this section. If the Division grants the waiver, the system is not required to monitor.

3. The Division may grant a waiver based on a consideration of the following factors:

a. Potential asbestos contamination of the water source, and

b. The use of asbestos-cement pipe for finished water distribution and the corrosive nature of the water.

4. A waiver remains in effect until the completion of the three-year compliance period. Systems not receiving a waiver must monitor in accordance with the provisions of paragraph (B1) of this section.

5. A system vulnerable to asbestos contamination due solely to corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

6. A system vulnerable to asbestos contamination due solely to source water shall monitor in accordance with the provision of paragraph (A) of this section.

7. A system vulnerable to asbestos contamination due both to its source water supply and corrosion of asbestos-cement pipe shall take one sample at each entry point after treatment and a minimum of one tap sample served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

8. A system which exceeds PMCL listed in Section 22.601 shall monitor quarterly beginning in the next quarter after the violation occurred.

9. The Division may decrease the quarterly monitoring requirement to the frequency specified in paragraph B1 of this section provided the Division has determined that the system is reliably and consistently below the maximum contaminant level. In no case can a Division make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface (or combined surface/ground) water system takes a minimum of four quarterly samples.

10. If monitoring data collected after January 1, 1990 are generally consistent with the requirements of this section then the Division may allow systems to use that data to satisfy the monitoring requirement for the initial compliance period beginning January 1, 1993.

C. The frequency of monitoring conducted to determine compliance with the maximum contaminant levels in Section 22.601 for antimony, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium and thallium shall be as follows:

1. Groundwater systems shall take one sample at each sampling point once every three (3) years. Surface Water systems [or combined surface/ground] shall take one sample annually at each sampling point beginning January 1, 1993.

2. The system may apply to the Division for a waiver from the monitoring frequencies specified in paragraph C(1) of this section.

3. A condition of the waiver shall require that a system shall take a minimum of one sample while the waiver is effective. The term during which the waiver is effective shall not exceed one compliance cycle (i.e., nine years).

4. The Division may grant a waiver provided surface water systems have monitored annually for at least three years and groundwater systems have conducted a minimum of three rounds of monitoring. (At least one sample shall have been taken since January 1, 1990). Both surface and groundwater systems shall demonstrate that all previous analytical results were less than the maximum contaminant level. Systems that use a new water source are not eligible for a waiver until three rounds of monitoring from the new source have been completed.

5. In determining the appropriate reduced monitoring frequency, the Division shall consider:

a. Reported concentrations from all previous monitoring.

b. The degree of variation in reported concentrations; and

c. Other factors which may affect contaminant concentrations such as changes in groundwater pumping rates, changes in the systems configuration, changes in the system's operating procedures, or changes in stream flows or characteristics.

6. A decision by the Division to grant a waiver shall be made in writing and shall set forth the basis for the determination. The determination may be initiated by the Division or upon an application by the public water system. The public water system shall specify the basis for its request. The Division shall review and, where appropriate, revise its determination of the appropriate monitoring frequency when the system submits new monitoring data or when other data relevant to the system's appropriate monitoring frequency become available.

7. Systems which exceed the MCLs as calculated in paragraph I of this Section shall monitor quarterly beginning in the next quarter after the violation occurred.

8. The Division may decrease the quarterly monitoring requirement to the frequencies specified in paragraphs C1 and C2 of this section provided it has determined that the system is reliably and consistently below the maximum contaminant level. In no case can the Division make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface water system takes a minimum of four quarterly samples.

D. All public water systems (community; non-transient, non-community; and transient, non-community systems) shall monitor to determine compliance with the maximum contaminant level for nitrate in Section 22.601.

1. Community and non-transient, non-community water systems served by groundwater systems shall monitor annually beginning January 1, 1993; systems served by surface water shall monitor quarterly beginning January 1, 1993.

2. For community and non-transient, non-community water systems, the repeat monitoring frequency for groundwater systems shall be quarterly for at least one year following any one sample in which the concentration is >50 percent of the MCL. The Division may allow a groundwater system to reduce the sampling frequency to annually after four consecutive quarterly samples are reliably and consistently less than the MCL.

3. For community and non-transient, non-community water systems, the Division may allow a surface water system to reduce the sampling frequency to annually if all analytical results from four consecutive quarters are <50 percent of the MCL. A surface water system shall return to quarterly monitoring if any one sample is >50 percent of the MCL.

4. Each transient non-community water system shall monitor annually beginning January 1, 1993.

5. After the initial round of quarterly sampling is completed, each community and non-transient non-community system which is monitoring annually shall take subsequent samples during the quarter(s) which previously resulted in the highest analytical result.

E. All public water systems (community; non-transient, non-community;and transient, non-community systems) shall monitor to determine compliance with the maximum contaminant level for nitrite in Section 22.601

1. All public water systems shall take one sample at each sampling point in the distribution system during the compliance period beginning January 1, 1993 and ending December 31, 1995.

2. After the initial sample, systems where an analytical result for nitrite is <50 percent of the MCL shall monitor at the frequency specified by the Division.

3. For community, non-transient, non-community, and transient non-community water systems, the repeat monitoring frequency for any water system shall be quarterly for at least one year following any one sample in which the concentration is >50 percent of the MCL. The Division may allow a system to reduce the sampling frequency to annually after determining the system is reliably and consistently less than the MCL.

4. Systems which are monitoring annually shall take each subsequent sample during the quarter(s) which previously resulted in the highest analytical result.

F. Confirmation Samples:

1. Where the results of sampling for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium indicate an exceedance of the maximum contaminant level, the Division may require that one additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same sampling point.

2. Where nitrate or nitrite sampling results indicate an exceedance of the maximum contaminant level, the system shall take a confirmation sample within 24 hours of the system's receipt of notification of the analytical results of the first sample. Systems unable to comply with the 24-hour sampling requirement must immediately notify the consumers in the area served by the public water system in accordance with Section 22.41. Systems exercising this option must take and analyze a confirmation sample within two weeks of notification of the analytical results of the first sample.

3. If a Division-required confirmation sample is taken for any contaminant, then the results of the initial and confirmation sample shall be averaged. The resulting average shall be used to determine the system's compliance in accordance with paragraph I of this section. The Division has the discretion to delete results of obvious sampling errors.

G. The Division may require more frequent monitoring than specified in paragraphs B, C, D and E of this section or may require confirmation samples for positive and negative results at its discretion.

H. Systems may apply to the Division to conduct more frequent monitoring than the minimum monitoring frequencies specified in this section.

I. Compliance with Section 22.601 shall be determined based on the analytical result(s) obtained at each sampling point:

1. For systems which are conducting monitoring at a frequency greater than annual, compliance with the maximum contaminant levels for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, and thallium is determined by a running annual average at each sampling point. If the average at any sampling point is greater than the MCL, then the system is out of compliance. If any one sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any sample

below the detection limit shall be calculated at zero for the purpose of determining the annual average.

2. For systems which are monitoring annually, or less frequently, the system is out of compliance with the maximum contaminant levels for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, and thallium if the level of a contaminant at any sampling point is greater than the MCL. If a confirmation sample is required by the Division, the determination of compliance will be based on the average of two samples.

3. Compliance with the maximum contaminant levels for nitrate and nitrite is determined based on one sample if the levels of these contaminants are below the MCLs. If the levels of nitrate and/or nitrite exceed the MCLs in the initial sample, a confirmation sample is required and compliance shall be determined based on the average of the initial and confirmation samples.

4. If a public water system has a distribution system separable from other parts of the distribution system with no interconnections, the Division may allow the system to give public notice to only the area served by that portion of the system which is out of compliance.

J. Each public water system shall monitor at the time designated by the Division during each compliance period.

K. At the discretion of the Division, nitrate levels not to exceed 20 mg/L may be allowed in NCWS and NTNCWS if the supplier of water demonstrates to the satisfaction of the Division that:

1. Such water will not be available to children under one (1) year of age;

2. There will be continuous posting of the fact that nitrate levels exceed ten (10) mg/L and the potential health effects of exposure and;

3. No adverse health effects shall result.

22.603 Fluoride (F):

A. Where fluoridation has been or will be instituted as provided by Delaware Law and the fluoride content of a water supply is less than 0.8 mg/L, fluoride should be adjusted to provide a concentration within a range of 0.8-1.2 mg/L and shall not exceed 1.8 mg/L. Defluoridation of water shall be provided when the natural fluoride concentration exceeds 1.8 mg/L. In addition to the sampling and analysis required by Section 22.605, fluoridated and defluoridated water supplies shall be sampled and analyzed daily by the supplier of water at a representative point(s) in the water supply system. The fluoride levels shall be reported to the Division pursuant to Section 22.401.

B. All municipal water supplies, whether municipally owned or privately owned, shall comply with paragraph A of this section. All affected water supplies shall submit cost estimates to the Department of Health and Social Services no later than November 15, 1998.

22.604 Sodium (Na):

A. The supplier of water for a CWS shall collect and analyze one (1) sample per plant at the entry point of the distribution system for the determination of sodium concentration levels; samples must be collected and analyzed annually for systems utilizing surface water sources in whole or in part and at least every three (3) years for systems utilizing solely ground water sources. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with Division approval be considered one (1) treatment plant for determining the minimum number of samples. The supplier of water may be required by the Division to collect and analyze water samples for sodium more frequently in locations where the sodium content is variable.

B. The supplier of water shall report to the Division the results of analyses for sodium pursuant to Section 22.401.

C. The supplier of water shall notify appropriate local and State public health officials of the sodium levels by written notice by direct mail within three (3) months. A copy of each notice required to be provided by this paragraph shall be sent to the Division within ten (10) days of issuance. The supplier of water is not required to notify appropriate local and State public health officials of the sodium levels where the Division provides such notices in lieu of the supplier.

D. Analysis for sodium shall performed by the flame photometric method in accordance with the procedures described in "Standard Methods for the EXamination of Water Wastewater" 14th Edition, pp. 250-253, or by Method 273.1, Atomic Absorption - Direct Aspiration or Method 273.2, Atomic Absorption Graphite Furnace, in "Methods for Chemical Analysis of Water and Waste," EMSL Cincinnati, EPA, 1979, or by Method D1428-64(a) in Annual Book of ASTM Standards, part 31, Water or any alternate analytical technique approved by the Division.

22.605 Inorganic Compliance Determination: Analysis for the purpose of determining compliance with Section 22.601 shall be in accordance with the following:

A. PMCL analyses for all CWSs utilizing surface water sources hall be conducted annually. SMCL analyses shall be performed at the discretion of the Division.

B. PMCL analyses for all CWSs utilizing only ground water sources shall be conducted at three (3) year intervals. SMCL analyses shall be performed at the discretion of the Division.

C. For NCWSs and NTNCWSs, whether supplied by surface or ground water sources, analyses for nitrate shall be conducted at intervals determined by the Division.

D. The Division has the authority to determine compliance or initiate enforcement action based upon analytical results and other information complied by its sanctioned representatives and agencies.

E. If the result of an analysis made pursuant to paragraphs A, B and C indicates that the level of any primary contaminant listed in Section 22.601, excluding nitrates, exceeds the PMCL, the supplier of water shall report to the Division within seven (7) days and initiate three (3) additional analyses at the same sampling point with one (1) month.

F. When the average of four (4) analyses made pursuant to paragraph E of this section, rounded to the same number of significant figures as the PMCL for the substance in question, exceeds the PMCL, the supplier of water shall notify the Division pursuant to Section 22.40 and give notice to the public pursuant to Section 22.41. Monitoring after public notification shall be at a frequency designated by the Division and shall continue until the PMCL has not been exceeded in two (2) successive samples or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

G. The provision of paragraphs E and F of this Section notwithstanding compliance with the PMCL for nitrate shall be determined on the basis of the mean of two (2) analyses. When a level exceeding the PMCL for nitrate is found, a second analysis shall be initiated within twenty-four (24) hours, and if the mean of the two (2) analyses exceeds the PMCL, the supplier of water shall report his findings to the Division pursuant to Section 22.40 and shall notify the public pursuant to Section 22.41.

H. For the initial analyses required by paragraphs A, B and C of this Section, data for surface waters acquired within one (1) year prior to the effective date and data for ground waters acquired within three (3) years prior to the effective date of this Section may be substituted at the discretion of the Division.

22.606 Analytical Methodology: Analyses conducted to determine compliance with Section 22.601 for inorganic chemicals shall be made in accordance with the following methods.

A. PMCLs11

1. Antimony--Atomic Absorption Furnace Technique14 using Method1 204.2 or Method3 3113; Atomic Absorption Platform Technique14 using Method9 220.9; ICP-Mass Spectrometry14 using Method9 200.8; Hydride-Atomic Absorption15 using Method2 D-3697-87.

2. Arsenic--Atomic Absorption Furnace Technique using Method1 206.2 or Method3 30415; Atomic Absorption Gaseous Hydride using Method1 206.3, Method2 D2972-84B, Method3 303E or Method4 I-3063-85; Inductively Coupled Plasma using Method1 200.7A8; or Spectrophotometric Silver Diethyldithiocarbamate using Method1 206.4, Method2 D2972-84A or Method3 307B after C(4A).

3. Asbestos--Transmission Electron Microscopy "Analytical Method For Determination of Asbestos Fiber in Water," EPA-600/4-83-043, September 1983, U.S. EPA, Environmental Research Laboratory, Athens, Georgia 30613.

4. Barium--Atomic Absorption Direct Aspiration14 using Method1 208.1 or Method3 3111D; Atomic Absorption Furnace Technique14 using Method1 208.2, or Method3 3113B; or Inductively Coupled Plasma8,14 using Method1 200.7 or Method3 3120.

5. Beryllium--Atomic Absorption Furnace Technique14 using Method1 210.2 or Method2 D-3645-84B or Method3 3113; Atomic Absorption Platform Technique14 using Method9 200.9; Inductively Coupled Plasma8,14 using Method9 200.7 or Method3 3120; ICP-Mass Spectrometry14 using Method9 200.8.

6. Cadmium--Atomic Absorption Furnace Technique14 using Method1 213.2, Method3 3113B; or Inductively Coupled Plasma14 using Method1 200.7.

7. Chromium--Atomic Absorption Furnace Technique14 using Method1 218.2, Method3 3113B; or Inductively Coupled Plasma14 using Method1 200.7 or Method3 3120.

8. Cyanide--Spectrophotometric Distillation using Method1 335.2 or Method2 D-2036-89A or Method3 4500-CN-D or Method4 I330085; Automated Spectrophotometric Distillation using Method1 335.3 or Method3 4500-CN-E; Selective Electrode Distillation using Method2 D-2036-89A or Method3 4500-CN-F; Amenable Spectrophotometric Distillation using Method1 335.1 or Method2 D-2036-89B or Method3 4500-CN-G.

9. Fluoride--Colorimetric SPADNS with Distillation using Method1 340.1, Method2 D1179-72A or Method3 43A and C; Potentiometric Ion Selective Electrode using Method1 340.2, Method2 D1179-72B or Method3 413B; Automated Alizarin Fluoride Blue with Distillation using Method1 340.3, Method3 413E or Method5 129-71W; or Automated Ion Selective Electrode using Method6 380-75WE.

10. Lead--Atomic Absorption Furnace Technique using Method1 239.2

11. Mercury--Manual Cold Vapor Technique15 using Method1 245.1, Method2 D3223-86 or Method3 3112B; or Automated Cold Vapor Technique15 using Method1 245.2.

12. Nickel--Atomic Absorption Furnace Technique14 using Method1 249.2 or Method3 3113; Atomic Absorption Platform Technique14 using Method9 200.9; Atomic Absorption Direct Aspiration14 using Method1 249.1 or Method3 3111B; Inductively Coupled Plasma14 using Method9 200.7 or Method3 3120; ICP-Mass Spectrometry14 using Method9 200.8.

13. Nitrate-N--Manual Cadmium Reduction

using Method1 353.3, Method2 D3867-90 or Method3 4500-NO3-E; Automated Hydrazine Reduction using Method1 353.1, Automated Cadmium Reduction using Method1 353.2, Method2 D3867-90 or Method3 4500-NO3-F; Ion Selective Electrode using Method7 WeWWG/5880; or Ion Chromatography using Method11 300.0 or Method10 B-1011.

14. Nitrite-N--Spectrophotometric using Method1 354.1 Manual Cadmium Reduction using Method1 353.3, Method2 D3867-90 or Method3 4500-NO3-E; Automated Cadmium Reduction using Method1 353.2, Method2 D3867-90 or Method3 4500-NO3-F; or Ion Chromatography using Method11 300.0 or Method10 B-1011.

15. Selenium--Atomic Absorption Gaseous Hydride15 Using Method2 D3859-84A, Method3 3114B; Atomic Absorption Furnace Technique13 14 using Method1 270.2, Method2 D3859-88 or Method3 3113B.

16. Thallium--Atomic Absorption Furnace Technique14 using Method1 279.2 or Method3 3113; Atomic Absorption Platform Technique14 using Method9 200.9; ICP-Mass Spectrometry14 using Method9 200.8.

B. SMCLs

1. Aluminum--Atomic Absorption Direct Aspiration using Method1 202.1, Method3 303C, or Method4 I-305i-84; Atomic Absorption Graphite Furnace Technique using Method1 202.2 or Method3 304; Atomic Absorption Platform Technique using Method9 200.9; Inductively Coupled Plasma Technique using Method9 200.7 or Method3 3120B; ICP-Mass Spectrometry using Method9 200.8.

2. Chloride--Potentiometric using Method3 407C; or Ion Chromatography using Method1 300.0, Method2 D4327 or Method3 429.

3. Color--Colorimetric Platinum Cobalt using Method1 110.2; Visual Comparison using Method3 204A; or Spectrophotometric using Method3 204B.

4. Foaming Agents--Methylene Blue Active Substances using Method1 425.1; or Anionic Surfactants as MBAS using Method3 512B.

5. Iron--Atomic Absorption Direct Aspiration using Method1 236.1; Atomic Absorption Furnace Technique using Method1 236.2; or Metals by Atomic Absorption Spectrometry using Method3 303.

6. Manganese--Atomic Absorption Direct Aspiration using Method1 243.1; Atomic Absorption Furnace Technique using Method1 243.2; or Metals by Atomic Absorption Spectrometry using Method3 303.

7. Odor--Threshold Odor Consistent Series using Method1 140.1; or Odor using Method3 207.

8. pH--Potentiometric using Method1 150.1, Method2 D1293-84A or B, or Method3 423.

9. Sulfate--Turbidimetric using Method1 375.4 or Method2 D516-82A; or Ion Chromatography using Method1 300.0 or Method2 D4327.

10. Total Dissolved Solids (Total Filterable Residue)--Gravimetric using Method1 160.1, Method3 209B or Method4 I-1750-84.

11. Zinc--Atomic Absorption Direct Aspiration using Method1 289.1; Atomic Absorption Furnace Technique using Method1 289.2; or Metals by Atomic Absorption Spectrometry using Method3 303.

12. Any alternate analytical technique approved by the Division.

1 "Methods of Chemical analysis of Water and Wastes," EPA Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268 (EPA-600/4-79-020), March 1985. Available from ORD Publications, CERI, EPA, Cincinnati, Ohio 45268.

2 Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19013.

3 "Standard Methods for the Examination of Water and Wastewater," 17th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1985.

4 "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," Techniques of Water-Resources Investigations of the United States Geological Survey Book 5, Chapter A-1, Third Edition, 1989. Available at Superintendent of Documents, U.S. Government Printing Office, Washington D.C.

5 "Fluoride in Water and Wastewater. Industrial Method #129-71 W." Technicon Industrial Systems. Tarrytown, New York 10591, December 1972.

6 "Fluoride in Water and Wastewater," Technicon Industrial Systems. Tarrytown, New York 10591, February 1976.

7 "Orion Guide to Water and Wastewater Analysis." Form WeWWG/5880, p. 5, 1985. Orion Research, Inc., Cambridge, Maryland.

8 "Inductively Coupled Plasma Atomic Emission Analysis of Drinking Water," Appendix to Method 200.7, September 1985. U.S.E.P.A. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

9 "Methods for the Determination of Metals in Environmental Samples," Available at NTIS, PB 91-231498.

10 "Water Test Method for Determination of Nitrite/Nitrate in Water Using Single Column Ion Chromatograph, Method B-1011,"Millipore Corporation, Waters Chromatography Division, 34 Maple Street, Milford, MA 001757.

11 "Method 300. Determination of Inorganic Anions in Water by Ion Chromatography," Inorganic Chemistry Branch, Environmental Monitoring

Systems Laboratory, August 1991.

12 The addition of 1 mL of 30% H2O2 to each 100 mL of standards and samples is required before analysis.

13 Prior to dilution of the Arsenic and Selenium calibration standards, add 2 mL of 30% H2O2 for each 100 mL of standard.

14 Samples that contain less than 1 NTU (nephelometric turbidity unit) and are properly preserved (conc HNO3 to pH < 2) may be analyzed directly (without digestion) for total metals, otherwise digestion is required. Turbidity must be measured on the preserved samples just prior to the initiation of metal analysis. When digestion is required, the total recoverable technique as defined in the method must be used.

15 For the gaseous hydride determinations of antimony and selenium and for the determination of mercury by the cold vapor techniques, the proper digestion technique as defined in the method must be followed to ensure the element is in the proper state for analyses.

16 For approved analytical procedures for metals, the technique applicable to total metals must be used.

C. Sample Collection and Preservation: - Sample collection for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrite, selenium and thallium under this section shall be conducted using the sample preservation method(s), container, and maximum holding time procedures specified in the table below:

Contaminant	Preservative1	Container 2	Time3
Antimony	Conc HNO3 to pH <2	P or G	6 months
Asbestos	Cool, 4 oC	P or G	
Barium	Conc HNO3 to pH <2	P or G	6 months
Beryllium	Conc HNO3 to pH <2	P or G	6 months
Cadmium	Conc HNO3 to pH <2	P or G	6 months
Chromium	Conc HNO3 to pH <2	P or G	6 months
Cyanide	Conc HNO3 to pH <2	P or G	14 days
Fluoride	Conc HNO3 to pH <2	P or G	1 month
Mercury	Conc HNO3 to pH <2	P or G	28 days
Nickel	Conc HNO3 to pH <2	P or G	6 months
Nitrate:	Cool 4o C, NAOH to pH >124		
- Chlorinated	None	P or G	28 days
-Non-chlorinated	Conc HNO3 to pH <2	P or G	14 days
Nitrite	Conc HNO3 to pH <2	P or G	48 hours
Selenium	Cool, 4 oC	P or G	6 months
Thallium	Conc H2SO4 to pH <2	P or G	6 months
	Cool, 4 oC		
	Conc HNO3 to pH <2		
	Conc HNO3 to pH <2		

1 If HNO3 cannot be used because of shipping restrictions, sample may be initially preserved by icing and immediately shipped to the laboratory. Upon receipt in the laboratory, the sample must be acidified with conc HNO3 to pH <2. At time of analysis, sample container should be thoroughly rinsed with 1:1 HNO3; washings should be added to sample.

2 P = plastic, hard or soft; G = glass, hard or soft.

3 In all cases, samples should be analyzed as soon after collection as possible.

4 See method(s) for the informaton for preservation.

D. Lab Approval: Analysis under this section shall only be conducted by laboratories that have received approval by EPA or the State of Delaware. Laboratories may conduct sample analysis under provisional certification until January 1, 1996. To receive approval to conduct analyses for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrite, selenium, and thallium the laboratory must:

1. Analyze Performance Evaluation samples which include those substances provided by EPA Environmental Monitoring and Support Laboratory or equivalent samples provided by the State of Delaware.

2. Achieve quantitative results on the analyses that are within the following acceptance limits:

Contaminants	Acceptance limit
Antimony	6 # 30 at ≥ 0.006 mg/l
Asbestos	2 Standard deviations based on study statistics
Barium	+15% at ≥ 0.15 mg/l
Beryllium	+15% at ≥ 0.001 mg/l
Cadmium	+20% at ≥ 0.002 mg/l
Chromium	±15% at ≥ 0.01 mg/l
Cyanide	±25% at ≥ 0.1 mg/l
Fluoride	±10% at ≥ 1 to 10 mg/l
Mercury	±30% at ≥ 0.0005 mg/l
Nickel	±15% at ≥ 0.01 mg/l
Nitrate	±10% at ≥ 0.4 mg/l
Nitrite	±15% at ≥ 0.4 mg/l
Selenium	±20% at ≥ 0.01 mg/l
Thallium	±30% at ≥ 0.002 mg/l

22.607 Lead (Pb) and Copper (Cu): - Unless otherwise indicated, each of the provisions of this Section applies to CWSs and NTNCWSs. The requirements in Section (22.607) shall take effect November 9, 1992.

A. General Requirements:

1. Action Level:

a. The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Section 22.607(G) is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).

b. The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Section 22.607(G) is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).

c. The 90th percentile lead and copper levels shall be computed as follows:

1. The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.

2. The number of samples taken during the monitoring period shall be multiplied by 0.9.

3. The contaminant concentration in the numbered sample yielded by the calculation in paragraph 1C(2) is the 90th percentile contaminant level.

4. For water systems serving fewer than 100 people that collect five samples per monitoring period, the 90th percentile is computed by taking the average of the highest and second highest concentrations.

2. Corrosion Control Treatment Requirements:

a. All water systems shall install and operate optimal corrosion control treatment as defined in Section 22.147.

b. Any water system that complies with the applicable corrosion control treatment requirements specified by the Division under Sections 22.607 B and C shall be deemed in compliance with each treatment requirement contained in paragraph 2(a) of this section.

3. Source Water Treatment Requirements: Any system exceeding the lead or copper action level shall implement all applicable source water treatment requirements specified by the Division under Section 22.607D.

4. Lead Service Line Replacement: Any system exceeding the lead action level after implementation of applicable corrosion control and source water treatment requirements shall complete the lead service line replacement requirements contained in Section 22.607E.

5. Public Education Requirements: Any system exceeding the lead action level shall implement the public education requirements contained in Section 22.607F.

6. Monitoring and Analytical Requirements: Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results under this Section shall be completed in compliance with Sections 22.607 G, H, I and L.

7. Reporting Requirements: Systems shall report to the Division any information required by the treatment provisions of this Section and Section 22.607J.

8. Recordkeeping Requirements: Systems shall maintain records in accordance with Section 22.607K.

9. Violation of National Primary Drinking Water Regulations: Failure to comply with the applicable requirements of Section 22.607 including requirements established by the Division pursuant to these provisions, shall constitute a violation of the national primary drinking water regulations for lead and/or copper.

B. Applicability of Corrosion Control Treatment Steps for Small, Medium Size and Large Water Systems:

1. Systems shall complete the applicable corrosion control treatment requirements described in Section 22.607C by the deadlines established in this section.

a. A large system (serving >50,000 persons) shall complete the corrosion control treatment steps specified in paragraph (4) of this section, unless it is deemed to have optimized corrosion control under paragraph 2(b) or 2(c) of this section.

b. A small system (serving <3300 persons) and a medium-size system (serving >3,300 and <50,000 persons) shall complete the corrosion control

treatment steps specified in paragraph (5) of this section, unless it is deemed to have optimized corrosion control under paragraph 2(a), 2(b) or 2(c) of this section.

2. A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this section if the system satisfies one of the following criteria:

a. A small or medium-size water system is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods conducted in accordance with Section 22.607(G).

b. Any water systems may be deemed by the Division to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the Division that it has conducted activities equivalent to the corrosion control steps applicable to such system under this section. If the division makes this determination, it shall provide the systems with written notice explaining the basis for its decision and shall specify the water quality control parameters representing optimal corrosion control in accordance with Section 22.607(C)(6). A system shall provide the Division with the following information in order to support a determination under this paragraph.

1. The results of all test samples collected for each of the water quality parameters in section 22.607(C)3(a).

2. A report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in Section 22.607(C)3(a), the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment.

3. A report explaining how corrosion control has been installed and how it is being maintained to insure minimal lead and copper concentrations at consumer's taps; and

4. The results of tap water samples collected in accordance with Section 22.607G at least once every six months for one year after corrosion control has been installed.

c. Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with Section 22.607(G) and source water monitoring conducted in accordance with Section 22.607(I) that demonstrates for two consecutive six-month monitoring periods that the difference between the 90th percentile tap water lead level computed under Section 22.607(A)(1)(c), and the highest source water lead concentration, is less than the Practical Quantitation Level (PQL) for lead specified in Section 22.607(L) (2)(c).

3. Any small or medium-size water system that is required to complete the corrosion control steps due to its exceedance of the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two consecutive monitoring periods conducted pursuant to Section 22.607(G) and submits the results to the Division. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system (or the Division, as the case may be) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety. The Division may require a system to repeat treatment steps previously completed by the system where the Division determines that this is necessary to properly implement the treatment requirements of this section. The Division shall notify the system in writing of such a determination and explain the basis for its decision.

4. Treatment Steps and Deadlines for Large Systems:

a. Except as provided in paragraph 2(b) and 2(c) of this section, large systems shall complete the following corrosion control treatment steps (described in the referenced portions of Sections 22.607(C), (G) and (H) by the indicated dates.

Step 1: The system shall conduct two six month initial monitoring periods by January 1, 1993.

Step 2: The system shall complete corrosion control studies, Section 22.607(C)3, in 18 months, by July 1, 1994.

Step 3: The Division shall designate optimal corrosion control treatment, Section 22.607(C)4, in 6 months, by January 1, 1995.

Step 4: The system shall install optimal corrosion control treatment, Section 22.607(C)5, in 24 months, by January 1, 1997.

Step 5: The system shall complete followup sampling, Section 22.607(G)4(b) and Section 22.607 (H)3, in 12 months, by January 1, 1998

Step 6: The Division shall review installation of treatment and designate optimal water quality control parameters, Section 22.607(C)6, in 6 months, by July 1, 1998.

Step 7: The system shall operate in compliance with the Division specified optimal water quality control parameters, Section 22.607(C)7, and continue to conduct tap sampling, Section 22.607(G)4 and Section 22.607(H)4.

5. Treatment Steps and Deadlines for Small and Medium-Size Systems:

a. Except as provided in paragraph (2) of this section, small and medium-size systems shall complete the following corrosion control treatment steps (described in the referenced portions of Section 22.607 (C), (G) and (H) by the indicated time periods.

Step 1: The system shall conduct initial tap sampling, Section 22.607(G)4(a) and Section 22.607 (H)2, until the system either exceeds the lead or copper action level or becomes eligible for reduced monitoring under Section 22.607(G)4(d). A system exceeding the lead or copper

action level shall recommend optimal corrosion control treatment, Section 22.607 (C)1, within six months after it exceeds one of the action levels.

Step 2: Within 12 months after a system exceeds the lead or copper action level, the Division may require the system to perform corrosion control studies. The Division shall specify optimal corrosion control treatment, Section 22.607(C)4, within the following time frames.

1. For medium-size systems, within 18 months after such system exceeds the lead or copper action level.

2. For small systems, within 24 months after such system exceeds the lead or copper action level.

Step 3: If the Division requires a system to perform corrosion control studies under step 2, the system shall complete the studies, Section 22.607(C)3, within 18 months after the Division requires that such studies be conducted.

Step 4: If the system has performed corrosion control studies under step 2, the Division shall designate optimal corrosion control treatment, Section 22.607(C)4, within 6 months after completion of step 3.

Step 5: The system shall install optimal corrosion control treatment, Section 22.607(C)5, within 24 months after the Division designates optimal corrosion control treatment.

Step 6: The system shall complete follow-up sampling, Section 22.607(G)4(b) and Section 22.607(H)3, within 36 months after the Division designates optimal corrosion control treatment.

Step 7: The Division shall review the systems's installation of treatment and designate optimal water quality control parameters, Section 22.607(C)6, within 6 months after complet ion of Step 6.

Step 8: The system shall operate in compliance with the Division-designated optimal water quality control parameters, Section 22.607(C)7, and continue to conduct tap sampling, Section 22.607(G)4(c) and Section 22.607 (H)4.

C. Description of Corrosion Control Treatment Requirements: Each System shall complete the corrosion control treatment requirements described below which are applicable to such systems under Section 22.607(B).

1. System Recommendation Regarding Corrosion Control Treatment: Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-size water systems exceeding the lead or copper action level shall recommend installation of one or more of the corrosion control treatments listed in paragraph (3)(a) of this section which the system believes constitutes optimal corrosion control for that system. The Division may require the system to conduct additional water quality parameter monitoring in accordance with Section 22.607(H)(2) to assist the Division in reviewing the system's recommendation.

2. Division Decision to Require Studies of Corrosion Control Treatment (Applicable to Small and Medium Size Systems): The Division may require any small or medium-size system that exceeds the lead or copper action level to perform corrosion control studies under paragraph (3) of this section to identify optimal corrosion control treatment for the system.

3. Performance of Corrosion Control Studies:

a. Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:

1. Alkalinity and pH adjustment;

2. Calcium hardness adjustment; and

3. The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

b. The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.

c. The water system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatment listed above:

1. Lead;
2. Copper;
3. pH;
4. Alkalinity;
5. Calcium;
6. Conductivity;
7. Orthophosphate (when an inhibitor containing a phosphate compound is used);
8. Silicate (when a inhibitor containing a silicate compound is used);
9. Water temperature.

d. The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one of the following:

1. Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or

2. Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment

and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

e. The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatments processes.

f. On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the Division in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraphs (3)(a) through (e) of this section.

4. Division Designation of Optimal Corrosion Control Treatment:

a. Based upon consideration of available information including, where applicable, studies performed under paragraph (3) of this section and a system's recommended treatment alternative, the Division shall either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in paragraph (3)(a) of this section. When designating optimal treatment the Division shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other quality treatment processes.

b. The Division shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination within 6 months of receiving follow up samples. If the Division requests additional information to aid its review, the water system shall provide the information.

5. Installation of Optimal Corrosion Control: Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the Division under paragraph (4) of this section.

6. Division Review of Treatment and Specification of Optimal Water Quality Control Parameters: The Division shall evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the water system and determine whether the system has properly installed and operated the optimal corrosion control treatment designated by the Division in paragraph (4) of this section. Upon reviewing the results of tap water and water quality parameter monitoring by the system, both before and after the system installs optimal corrosion control treatment, the Division shall designate:

a. A minimum value or a range of values for pH measured at each entry point to the distribution system;

b. A minimum pH value measured in all tap samples. Such value shall be equal to or greater than 7.0 unless the Division determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control;

c. If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the Division determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;

d. If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples;

e. If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples. The values for the applicable water quality control parameters listed above shall be those that the Division determines to reflect optimal corrosion control treatment for the system. The Division may designate values for additional water quality control parameters determined by the Division to reflect optimal corrosion control for the system. The Division shall notify the system in writing of these determinations and explain the basis for its decisions.

7. Continued Operation and Monitoring: All systems shall maintain water quality parameter values at or above minimum values or within a range designated by the Division under paragraph (6) of this section in each sample collected under Section 22.607 (H)4. If the water quality parameter value of any sample is below the minimum value or outside the range designated by the Division, then the system is out of compliance with this paragraph. As specified in Section 22.607 (H)4, the system may take a confirmation sample for any water quality parameter value not later than 3 days after the first sample. If a confirmation sample is taken, the result must be averaged with the first sampling result and the average must be used for any compliance determination under this paragraph. The Division has the discretion to delete results of obvious sampling errors from this calculation.

8. Modification of Division's Corrosion Control Treatment Decision: Upon its own initiative, or in response to a request by the water system or other interested party, the Division may modify treatment determination. The requests in writing must explain why the change is appropriate and provide supporting documentation. The treatment may be changed when the Division determines that it is necessary for the water system to continue optimizing corrosion control. The Division's decision must specify new treatment, explain basis for decision, and provide for implementation.

9. EPA Treatment Decisions in Lieu of the Division's Decisions: The regional administrator may issue federal determinations in lieu of the Division's

determinations when:

a. The Division fails to issue a determination in a timely manner.

b. The Division abuses its discretion in a substantial number of cases or in cases affecting large populations.

c. The technical basis of the Division's decision is indefensible in federal enforcement action(s).

D. Source Water Treatment Requirements: Systems shall complete the applicable source water monitoring and treatment requirements (described in the referenced portions of paragraph (2) of this section, and in Section 22.607(G) and (I)) by the following deadlines:

1. Deadlines for Completing Source Water Treatment Steps:

Step 1:A system exceeding the lead or copper action level shall complete lead and copper source water monitoring, Section 22.607 (I)2, and make a treatment recommendation to the Division, Section 22.607(D)2(a), within 6 months after exceeding the lead or copper action level.

Step 2:The Division shall make a determination regarding source water treatment, Section 22.607(D)2(b) within 6 months after submission of monitoring results under step 1.

Step 3:If the Division requires installation of source water treatment, the system shall install the treatment, Section 22.607(D)2(c), within 24 months after completion of step 2.

Step 4:The system shall complete follow-up tap water monitoring, Section 22.607(G)4(b), and source water monitoring, Section 22.607(I)3, within 36 months after completion of step 2.

Step 5:The Division shall review the system's installation and operation of source water treatment and specify maximum permissible source water levels for lead and copper, Section 22.607(D)2(d), within 6 months after completion of step 4.

Step 6:The system shall operate in compliance with the Division-specified maximum permissible lead and copper source water levels, Section 22.607(D)2(d), and continue source water monitoring, Section 22.607(I)(4).

2. Description of Source Water Treatment Requirements:

a. System Treatment Recommendation: Any system which exceeds the lead or copper action level shall recommend in writing to the Division the installation and operation of one of the source water treatments listed in paragraph (2b) of this section. A system may recommend that no treatment be installed based upon a demonstration that source water treatment is not necessary to minimize lead and copper levels at user's taps.

b. Division Determination Regarding Source Water Treatment: The Division shall complete an evaluation of the results of all source water samples submitted by the water system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the Division determines that treatment is needed, the Division shall either require installation and operation of the source water treatment recommended by the system (if any) or require the installation and operation of another source water treatment from among the following: ion exchange, reverse osmosis, lime softening or coagulation/filtration. If the Division request additional information to aid in its review, the water system shall provide the information by the date specified by the Division in its request. The Division shall notify the system in writing of its determination and set forth the basis for its decision.

c. Installation of Source Water Treatment: Each system shall properly install and operate the source water treatment designated by the Division under paragraph (2b) of this section.

d. Division Review of Source Water Treatment and Specification of Maximum Permissible Source Water Levels: The Division shall review the source water samples taken by the water system both before and after the system installs source water treatment, and determine whether the system has properly installed and operated the source water treatment designated by the Division. Based upon its review, the Division shall designate the maximum permissible lead and copper concentrations for finished water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment properly operated and maintained. The Division shall notify the system in writing and explain the basis for its decision.

e. Continued Operation and Maintenance: Each water system shall maintain lead and copper levels below the maximum permissible concentrations designated by the Division at each sampling point monitored in accordance with Section 22.607(I). The system is out of compliance with this paragraph if the level of lead or copper at any sampling point is greater than the maximum permissible concentration designated by the Division.

f. Modification of Division Treatment Decisions: Upon its own initiative or in response to a request by a water system or other interested party, the Division may modify its determination of the source water treatment under paragraph (2b) of this section, or maximum permissible lead and copper concentrations for finished water entering the distribution system under paragraph (2d) of this section. A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The Division may modify its determination where it concludes that such change is necessary to ensure

that the system continues to minimize lead and copper concentrations in source water. A revised determination shall be made in writing and set forth the new treatment requirements, explain the basis for the Division's decision and provide an implementation schedule for completing the treatment modifications.

g. EPA Treatment Decisions in Lieu of the Division's Decisions: The regional administrator may issue federal determinations in lieu of the Division's determination when:

1. The Division fails to issue a determination in a timely manner.

2. The Division abuses its discretion in a substantial number of cases or in cases affecting large populations.

3. The technical basis of the Division's decision is indefensible in federal enforcement action(s).

E. Lead Service Line Replacement Requirements:

1. Systems that fail to meet the lead action level in tap samples taken pursuant to Section 22.607(G)4(b) after installing corrosion control and/or source water treatment (whichever sampling occurs later) shall replace lead service lines in accordance with the requirements of this section. If a system is in violation of Section 22.607(B) or (D) for failure to install source water or corrosion control treatment, the Division may require the system to commence lead service line replacement under this section after the date by which the system was required to conduct monitoring under Section 22.607 (G)4(b) has passed.

2. A system shall replace annually at least 7 percent of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The systems shall identify the initial number of lead service lines in its distribution system based upon a materials evaluation, including the evaluation required under Section 22.607(G)1. The first year of lead service line replacement shall begin on the date the action level was exceeded in tap sampling referenced in paragraph (1) of this section.

3. A system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line taken pursuant to Section 22.607(G)2(c), is less than or equal to 0.015 mg/L.

4. A water system shall replace the entire service line (up to the building inlet) unless it demonstrates to the satisfaction of the Division under paragraph (5) of this section that it control less than the entire service line. In such cases, the system shall replace the portion of the line which the Division determines is under the system's control. The system shall notify the user served by the line that the system will replace the portion of the service line under its control and shall offer to replace the building owner's portion of the line, but is not required to bear the cost of replacing the building owner's portion of the line. For buildings where only a portion of the lead service line is replaced, the water system shall inform the resident(s) that the system will collect a first flush tap water sample after partial replacement of the service line is completed if the resident(s) so desire. In cases where the resident(s) accept the offer, the system shall collect the sample and report the results to the resident(s) within 14 days following partial lead service line replacement.

5. A water system is presumed to control the entire lead service line (up to the building inlet) unless the system demonstrates to the satisfaction of the Division, in a letter submitted under Section 22.607(J)5(d), that it does not have any of the following forms of control over the entire line (as defined by Division statutes, municipal ordinances, public service contracts or other applicable legal authority); authority to set standards for construction, repair, or maintenance of the line, authority to replace, repair, or maintain the service line, or ownership of the service line. The Division shall review the information supplied by the system and determine whether the system controls less than the entire service line and, in such cases, shall determine the extent of the system's control. The Division's determination shall be in writing and explain the basis for its decision.

6. The Division shall require a system to replace lead service lines on a shorter schedule than that required by this section, taking into account the number of lead service lines in the system, where such a shorter replacement schedule is feasible. The Division shall make this determination in writing and notify the system of its finding within 6 months after the system is triggered into lead service line replacement based on monitoring referenced in paragraph (1) of this section.

7. Any system may cease replacing lead service lines whenever lead service line samples collected pursuant to paragraph (1) meet the lead action level during each of two consecutive monitoring periods and the system submits the results to the Division. If the lead service line samples in any such water system thereafter exceeds the lead action level, the system shall recommence replacing lead service lines, pursuant to paragraph (2) in this section.

8. To demonstrate compliance with paragraphs (1) through (4) of this section, a system shall report to the Division the information specified in Section 22.607(J)5.

F. Public Education and Supplemental Requirements: A water system that exceeds the lead action level based on tap water samples collected in accordance with Section 22.607(G) shall deliver the public education materials contained in paragraphs (1) and (2) of this section in accordance with the requirements in paragraph (3) of this section.

1. Content of Written Materials: A water

system shall include the following text in all of the printed materials it distributes through its lead public education program. Any additional information presented by a system shall be consistant with the information below and be in plain English that can be understood by laypersons.

a. Introduction: The United States Environmental Protection Agency (EPA) and (insert name of water supplier) are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by (insert date when corrosion control will be completed for your system). This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace each lead service line that we control if the line contributes lead concentrations of 15 ppb or more after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at (insert water system's phone number). This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

b. Health effects of Lead: Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination-like dirt and dust-that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

c. Lead in Drinking Water:

1. Lead in drinking water, although rarely the sole cause of lead poisoning,can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

2. Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes, and other plumbing materials to 8.0%.

3. When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

d. Steps You Can Take in the Home to Reduce Exposure to Lead in Drinking Water:

1. Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call (insert phone number of water system).

2. If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take following precautions:

a. Let the water run from the tap before using it for drinking or cooking anytime the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one or two gallons of water and costs less than (insert a cost estimate based on flushing two times a day for 30 days) per month. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high-rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

b. Try not to cook with or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.

c. Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced, by removing the faucet strainers from all taps and running the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

d. If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify the Division of Public Health about the violation.

e. Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the liner or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be maintained in the files of the (insert name of department that issues building permits). A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the line. If the line is only partially controlled by the (insert name of the city, county, or water system that controls the line), we are required to provide you with information on how to replace your portion of the service line, and offer to replace that portion of the line at your expense and take a follow-up tap water sample within 14 days of the replacement. Acceptable replacement alternatives include copper, steel, iron and plastic pipes.

f. Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

3. The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

a. Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap, however all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit.

b. Purchase bottled water for drinking and cooking.

4. You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. The Division of Public Health and local government agencies that can be contacted include:

a. (Insert the name of city, county or department of public utilities) at (insert phone number) can provide you with information about your community's water supply, and a list of local laboratories that have been certified by EPA for testing water quality;

b. (Insert the name of city or county department that issues building permits) at (insert phone number) can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and

c. The Division of Public Health at (302) 739-5410 or the (insert the name of the city or county health department) at (insert phone number) can provide you with information about the health effects of lead and how you can have your child's blood tested.

5. The following is a list of some Division approved laboratories in your area that you can call to have your water tested for lead. (Insert names and phone numbers of at least two laboratories).

2. Content of Broadcast Materials: A water system shall include the following information in all public service announcements submitted under its lead public education program to television and radio stations for broadcasting:

a. Why should everyone want to know the facts about lead and drinking water? Because an unhealthy amount of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for (insert free or $ per sample). You can contact the (insert the name of the city or water system) for information on testing and on simple ways

to reduce your exposure to lead in drinking water.

1. To have your water tested for lead, or to get more information about this public health concern, please call (insert the phone number of the city or water system).

3. Delivery of a Public Education Program:

a. In communities where a significant proportion of the population speaks a language other than English, public education materials shall be communicated in the appropriate language(s).

b. A community water system that fails to meet the lead action level on the basis of tap water samples collected in accordance with Section 22.607(G) shall, within 60 days:

1. Insert notices in each customer's water utility bill containing the information in paragraph (a) of this section, along with the following alert on the water bill itself in large print: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION."

2. Submit the information in paragraph (1) of this section to the editorial department of the major daily and weekly newspapers circulated throughout the community.

3. Deliver pamphlets and/or brochures that contain the public education materials in paragraphs (b) and (d) of this section to facilities and organizations, including the following:

a. public schools and/or local school boards;

b. city or county health department;

c. Women,Infants and Children and/or Head Start Program(s) whenever available;

d. public and private hospitals and/or clinics;

e. pediatricians;

f. family planning clinics and;

g. local welfare agencies.

4. Submit the public service announcement in paragraph (2) of this section to at least five of the radio and television stations with the largest audiences that broadcast to the community served by the water system.

c. A community water system shall repeat the tasks contained in paragraphs 3(b),(2)and(3) of this section every 12 months, and the tasks contained in paragraphs 3(b)(4) of this section every 6 months for as long as the system exceeds the lead action level.

d. Within 60 days after it exceeds the lead action level, a non-transient non-community water system shall deliver the public education materials contained in paragraphs 1(a),(b) and (d) of this section as follows:

1. post informational posters on lead in drinking water in public places or common areas in each of the buildings served by the system; and

2. distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the non-transient non-community water system.

e. A non-transient non-community water system shall repeat the tasks contained in paragraph 3(d) of this section at least once during each calendar year in which the system exceeds the lead action level,

f. A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six-month monitoring period conducted pursuant to Section 22.607(G). Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.

4. Supplemental Monitoring and Notification of Results: A water system that fails to meet the lead action level on the basis of tap samples collected in accordance with Section 22.607(G) shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample, nor is the system required to collect and analyze the sample itself.

G. Monitoring Requirements for Lead and Copper in Tap Water:

1. Sample Site Location:

a. By the applicable date for commencement of monitoring under paragraph 4(a) of this section, each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this section, and which is sufficiently large enough to ensure that the water system can collect the number of lead and copper tap samples required in paragraph (3) of this section. All large systems shall have established targeted sampling sites by January 1,1992; all medium size systems by July 1, 1992; and all small systems by July 1, 1993. All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.

b. A water system shall use the information on lead, copper, and galvanized steel that is required to collect under Section 22.714 of these regulations (special monitoring for corrosivity characteristics) when conducting a materials evaluation. When an evaluation of the information collected pursuant to Section 22.714 is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in paragraph

(1) of this section, the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities):

1. All plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system;

2. All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and

3. All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

c. The sampling sites selected for a community water system's sampling pool ("tier 1 sampling sites") shall consist of single family structures that:

1. Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

2. Are served by a lead service line. When multiple-family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its sampling pool.

d. Any community water system with insufficient tier 1 sampling sites shall complete its sampling pool with "tier 2 sampling sites", consisting of buildings, including multiple-family residences that:

1. Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

2. are served by a lead service line.

e. Any community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with "tier 3 sampling sites", consisting of single family structures that contain copper pipes with lead solder installed before 1983.

f. The sampling sites selected for a non-transient non-community water system ("tier 1 sampling sites") shall consist of buildings that:

1. contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

2. are served by a lead service line.

g. A non-transient non-community water system with insufficient tier 1 sites that meet the targeting criteria in paragraph 1(f) of this section shall complete its sampling pool with tier 2 sampling sites that contain copper pipes with lead solder installed before 1983.

h. Any water system whose sampling pool does not consist exclusively of tier 1 sites shall demonstrate in a letter submitted to the Division under Section 22.607(J)1(b) why a review of the information listed in paragraph 1(b) of this section was inadequate to locate a sufficient number of tier 1 sites. Any community water system which includes tier 3 sampling sites in its sampling pool shall demonstrate in such a letter why it was unable to locate a sufficient number of tier 1 and tier 2 sampling sites. For large systems this shall be completed by January 1, 1992; for medium size systems by July 1, 1992; and for small systems by July 1, 1993.

i. Any water system whose distribution system contains lead service lines shall draw 50 percent of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and 50 percent of those samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall demonstrate in a letter submitted to the Division under Section 22.607(J)1(d) why the system was unable to locate a sufficient number of such sites. Such a water system shall collect lead service line samples from all of the sites identified as being served by such lines.

2. Sample Collection Methods:

a. All tap samples for lead and copper collected in accordance with this subpart, with the exception of lead service line samples collected under Section 22.607(E)3, shall be first draw samples.

b. Each first-draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a non-residential building shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the system or the system may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in this paragraph. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results. Acidification of samples may be done up to 14 days after collection.

c. Each service line sample shall be one liter in volume and have stood motionless in the lead service line for at least six hours. Lead service line samples shall be collected in one of the following three ways:

1. At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead

service line;

2. Tapping directly into the lead service line; or

3. If the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

d. A water system shall collect each first-draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from pool as long as the new site meets the same targeting criteria, and is within reasonable proximity of the original site.

3. Number of Samples: Water systems shall collect at least one sample during each monitoring period specified in paragraph (4)(a) of this section from the number of sites listed in the first column below ("standard monitoring"). A system conducting reduced monitoring under paragraph 4(d) of this section may collect one sample from the number of sites specified in the second column below during each monitoring period specified in paragraph 4(d) of this section.

System size (no.people served)	No.of sites (standard monitoring)	No. of sites (reduced monitoring)
>100,000	100	50
10,001-100,000	60	30
3,301 - 10,000	40	20
501 - 3,300	20	10
101 - 500	10	5
£100	5	5

4. Timing of Monitoring:

a. Initial Tap Sampling: The first six-month monitoring period for small, medium-size and large systems shall begin on the following dates:

System Size (no. people served)	First six-month monitoring period begins on
>50,000	January 1, 1992
3,301 - 50,000	July 1, 1992
<3,300	July 1, 1993

1. All large systems shall monitor during two consecutive six-month periods.

2. All small and medium-size systems shall monitor during each six-month monitoring period until:

a. the system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under Section 22.607(B) in which case the system shall continue monitoring in accordance with paragraph 4(b) of this section, or

b. the system meets the lead or copper action levels during two consecutive six-month monitoring periods, in which case the system may reduce monitoring in accordance with paragraph 1(d) of this section.

b. Monitoring after Installation of Corrosion Control and Source Water Treatment:

1. Any large system which installs optimal corrosion control treatment pursuant to Section 22.607(B)(4) Step 4 shall monitor during two consecutive six-month periods by the date specified in Section 22.607(B)(4) Step 5.

2. Any small or medium-size system which installs optimal corrosion control treatment pursuant to Section 22.607(B)(5) Step 5 shall monitor during two consecutive six-month periods by the date specified in Section 22.607(B)(5) Step 6.

3. Any system which installs source water treatment pursuant to Section 22.607(D)1 Step 3 shall monitor during two consecutive six-month periods by the date specified in Section 22.607(D)1 Step 4.

c. Monitoring after Division specifies Water Quality Parameter Values for Optimal Corrosion Control: After the Division specifies the values for water quality control parameters under Section 22.607(C)6, the system shall monitor during each subsequent six-month monitoring period, with the first monitoring period to begin on the date the Division specifies the optimal values under Section 22.607(C)6.

d. Reduced Monitoring:

1. A small or medium-size water system that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples in accordance with paragraph (3) of this section, and reduce the frequency of sampling to once per year. Division approval is not required.

2. Any water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Division under Section 22.607(C)6 during each of two consecutive six-month monitoring periods may request that the Division allow the system to reduce the frequency of monitoring to once per year and to reduce the number of lead and copper samples in accordance with paragraph (3) of this section. The Division shall review the information submitted by the water system and shall make its decision in

writing, setting forth the basis for its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

3. A small or medium-size water system that meets the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years. Any water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Division under Section 22.607(C)6 during three consecutive years of monitoring may request that the Division allow the system to reduce the frequency of monitoring from annually to once every three years. The Division shall review the information submitted by the water system and shall make its decision in writing, setting forth the basis for its determination. The Division shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

4. A water system that reduces the number and frequency of sampling shall collect these samples from sites included in the pool of targeted sampling sites identified in paragraph (1) of this section. Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August or September.

5. A small or medium-size water system subject to reduced monitoring that exceeds the lead or copper action levels shall resume sampling in accordance with paragraph 4(c) of this section and collect the number of samples specified for standard monitoring under paragraph (3) of this section. Any water system subject to reduced monitoring frequency that fails to operate within the range of values for the water quality control parameters specified by the Division under Section 22.607(C)6 shall resume tap water sampling in accordance with paragraph 4(c) of this section and collect the number of samples specified for standard monitoring under paragraph (3) of this section.

5. Additional Monitoring by Systems: The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the Division in making any determinations (i.e., calculating the 90th percentile lead or copper level) under this section.

H. Monitoring Requirements for Water Quality Parameters: All large water systems and all small and medium-size systems that exceed the lead or copper action level shall monitor water quality parameters in addition to lead and copper in accordance with this section. The requirements of this section are summarized in the table at the end of this section.

1. General Requirements:

a. Sample Collection Methods:

1. Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under this section is not required to be conducted at taps targeted for lead and copper sampling under Section 22.607(G)1. (NOTE: Systems may find it convenient to conduct tap sampling for water quality parameters at sites used for coliform sampling under Section 22.5.

2. Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

b. Number of Samples:

1. Systems shall collect two tap samples for applicable water quality parameters during each monitoring period specified under paragraphs (2) and (5) of this section from the following number of sites:

System Size (no. people served)	No. of sites for water quality parameters
>100,000	25
10,001-100,000	10
3,301 - 10,000	3
501 to 3,300	2
101 to 500	1
≤100	1

2. Systems shall collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in paragraph (2) of this section. During each monitoring period specified in paragraphs (3) through (5) of this section, systems shall collect one sample for each applicable water quality parameter at each entry point to the distribution system.

2. Initial Sampling: All large water systems shall measure the applicable water quality parameters as specified below at taps and at each entry point to the distribution system during each six-month monitoring period specified in Section 22.607(G)4(a). All small and medium-size systems shall measure the applicable water quality parameters at the locations specified below during each six-month monitoring period specified in Section

22.607(G)4(a) during which the system exceeds the lead or copper action levels.

a. At taps:

1. pH;

2. Alkalinity;

3. Orthophosphate, when an inhibitor containing a phosphate compound is used;

4. Silica, when an inhibitor containing a silicate compound is used;

5. Calcium;

6. Conductivity; and

7. Water Temperature.

b. At each entry point to the distribution system, all of the applicable parameters listed in paragraph (H) 2 (a).

3. Monitoring after Installation of Corrosion Control: Any large system which installs optimal corrosion control treatment pursuant to Section 22.607(B)(4) Step 4 shall measure the water quality parameters at the locations and frequencies specified below during each six-month monitoring period specified in Section 22.607(G)4(b)(1). Any small or medium-size system which installs optimal corrosion control treatment shall conduct such monitoring during each six-month monitoring period specified in Section 22.607(G)4(b)(2) in which the system exceeds the lead or copper action level.

a. At taps two samples for:

1. pH;

2. Alkalinity;

3. Orthophosphate, when an inhibitor containing a phosphate compound is used;

4. Silica, when an inhibitor;

5. Calcium, when calcium carbonate stabilization is used as part of corrosion control.

b. At each entry point to the distribution system, one sample every two weeks (bi-weekly) for:

1. pH;

2. When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and

3. When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).

4. Monitoring after Division Specifies Water Quality Parameter Values for Optimal Corrosion Control: After the Division specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under Section 22.607(C)6, all large systems shall measure the applicable water quality parameters in accordance with paragraph (3) of this section during each monitoring period specified in Section 22.607(G)4(c). Any small or medium-size system shall conduct such monitoring during each monitoring period specified in Section 22.607(G)4(c) in which the system exceeds the lead or copper action level. The system may take a confirmation sample for any water quality parameter value no later than 3 days after the first sample. If a confirmation sample is taken, the result must be averaged with the first sampling result and the average must be used for any compliance determination under Section 22.607(C)7. The Division has discretion to delete results of obvious sampling errors from this calculation.

5. Reduced Monitoring:

a. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two consecutive six-month monitoring periods under paragraph (4) of this section shall continue monitoring at the entry point(s) to the distribution system as specified in paragraph 3(b) of this section. Such system may collect two tap samples for applicable water quality parameters from the following reduced number of sites during each six-month monitoring period.

System Size (no. people served)	Reduced No. of sites for water quality parameters
>100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
<100	1

b. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Division under Section 22.607(C)6 during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in the paragraph 5(a) of this section from every six months to annually.

c. A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.

d. Any water system subject to reduced monitoring frequency that fails to operate within the range of values for the water quality parameters specified by the Division under Section 22.607(C)(6) shall resume tap water sampling in accordance with the number and frequency requirements in paragraph (3) of this section.

6. Additional Monitoring by Systems: The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the Division in making any determinations(i.e., determining concentrations of water quality parameters) under this section or Section 22.607(C).

SUMMARY OF MONITORING REQUIREMENTS FOR WATER QUALITY PARAMETERS

Monitoring	Parameters	location	frequency
Initial Monitoring	pH, alkalinity, orthophosphate or silica, calcium conductivity temperature	Taps and at entry to the distribution system	Every 6 months
After installation of Corrosion Control	pH, alkalinity, orthophosphate or silica, calcium	Taps	Every 6 months
After Division Specifies Parameter Values for Optimal Corrosion Control	pH, alkalinity, dosage rate and concentration (if alkalinity adjusted as part of corrosion control) inhibitor dosage rate and inhibitor residual	Entry point(s)to the distribution system	Bi-weekly
Reduced Monitoring	pH, alkalinity, orthophosphate or silica, calcium	Taps	Every 6 months at a reduced number of sites
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual	Entry point(s) to the distribution system	Bi-weekly

1. Table is for illustrated purposes; consult the text of this section for precise regulatory requirements.

2. Small and medium-size systems have to monitor for water quality parameters only during monitoring periods in which the systems exceeds the lead or copper level.

3. Orthophosphate must be measured only when an inhibitor containing a phosphate compound is used. Silica must be measured only when an inhibitor containing silicate compound is used.

4. Calcium must be measured only when calcium carbonate stabilization is used as part of corrosion control.

5. Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) must be measured only when an inhibitor is used.

I. Monitoring Requirements for Lead and Copper in Source Water:

1. Sample Location Collection Methods, and Number of samples:

a. A water system that fails to meet the lead or copper action level on the basis of tap samples collected in accordance with Section 22.607(G) shall collect lead and copper source water samples in accordance with the requirements regarding sample location, number of samples, and collection methods specified in Section 22.602(A)(1) - (4) (inorganic chemical sampling). (NOTE: The timing of sampling for lead and copper shall be in accordance with paragraphs(2) and (3) of this section, and not dates specified in Section 22.602(A)(1) and (2).

b. Where the results of sampling indicate an exceedance of maximum permissible source water levels established under Section 22.607(D)2(d), the Division may require that one additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same sampling point. If a Division-required confirmation sample is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the Division-specified maximum permissible levels. Any sample value below the detection limit shall be considered to be zero. Any value above the detection limit but below the PQL shall either be considered as the measure value or be considered one-half the PQL.

2. Monitoring Frequency after System Exceeds Tap Water Action Level: Any system which exceeds the lead or copper action level at the tap shall collect one source water sample from each entry point to the distribution system within six months after the exceedance.

3. Monitoring Frequency after Installation of Source Water Treatment: Any system which installs source water treatment pursuant to Section 22.607(D)(1) Step 2 shall collect an additional source water sample from each entry point to the distribution system during two consecutive six-month monitoring periods by the deadline specified in Section 22.607(D)(1) Step 4.

4. Monitoring Frequency after Division Specifies Maximum Permissible Source Water Levels or Determines that Source Water Treatment is not Needed:

a. A system shall monitor at the frequency specified below in cases where the Division specifies maximum permissible source water levels under Section 22.607(D)2(d) or determines that the system is not required to install source water treatment under Section 22.607(D)2(d).

1. A water system using only groundwater shall collect samples once during the three-year compliance period (as that term is defined in Section 22.1) in effect when the applicable Division determination under paragraph 4(a) of this section is made. Such systems shall collect samples once during each subsequent compliance period.

2. A water system using surface water (or a combination of surface and groundwater) shall collect samples once during each year, the first annual monitoring period to begin on the date on which the applicable Division determination is made under paragraph 4(a) of this section.

b. A system is not required to conduct

source water sampling for lead and/or copper if the system meets the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under paragraph 4(a)(1) or (2) of this section.

5. Reduced Monitoring Frequency:

a. A water system using only groundwater which demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and/or copper concentrations specified by the Division in Section 22.607(D)(1) Step 2 during at least three consecutive compliance periods under paragraph 4(a) of this section may reduce the monitoring frequency for lead and/or copper to once during each nine-year compliance cycle (as that term is defined in Section 22.1). Division approval is not required.

b. A water system using surface water (or a combination of surface and ground waters) which demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the Division in Section 22.607(D)2(d) for at least three consecutive years may reduce the monitoring frequency in paragraph 4(a) of this section to once during each nine-year compliance cycle (as that term is defined in Section 22.1). Division approval is not required.

c. A water system that uses a new source of water is not eligible for reduced monitoring for lead and/or copper until concentrations in samples collected from the new source during three consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the Division in Section 22.607(D)1 Step 5.

J. Reporting Requirements: All water systems shall report all of the following information to the Division in accordance with this section.

1. Reporting Requirements for Tap Water Monitoring for Lead and Copper and for Water Quality Parameter Monitoring:

a. A water system shall report the information specified below for all tap water samples within the first 10 days following the end of each applicable monitoring period specified in Section 22.607 (G),(H) and (I) (i.e., every six-months, annually, or every 3 years).

1. the results of all tap samples for lead and copper including the location of each site and the criteria under Section 22.206(G)1(c),(d),(e),(f), or (g) under which the site was selected for the system's sampling pool;

2. a certification that each first draw sample collected by the water system is one-liter in volume and, to the best of their knowledge, has stood motionless in the service line, or in the interior plumbing of a sampling site, for at least six hours;

3. where residents collected samples, a certification that each tap sample collected by the residents was taken after the water system informed them of proper sampling procedures specified in 22.607(G)2(b).

4. the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with 22.607(A)1(c);

5. with the exception of initial tap sampling conducted pursuant to Section 22.607(G)4(a) the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why 2 sampling sites have changed;

6. the results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under Section 22.607(H)2-5.

7. the results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under Section 22.607(H)2-5.

b. By the applicable date in Section 22.607(G)4(a) for commencement of monitoring, each community water system which does not complete its targeted sampling pool with tier 1 sampling sites meeting the criteria in Section 22.607(G)1(c) shall send a letter to the Division justifying its selection of tier 2 and/or tier 3 sampling sites under Section 22.607(G)1(d) and/or 1(e).

c. By the applicable date in Section 22.607(G)4(a) for commencement of monitoring, each non-transient, non-community water system which does not complete its sampling pool with tier 1 sampling sites meeting the criteria in Section 22.607(G)1(f) shall send a letter to the Division justifying its selection of sampling sites under Section 22.607(G)1(g).

d. By the applicable date in Section 22.607(G)4(a) for commencement of monitoring, each water system with lead service lines that is not able to locate the number of sites served by such lines required under Section 22.607(G)1(i) shall send a letter to the Division demonstrating why it was unable to locate a sufficient number of such sites based upon the information listed in Section 22.607(G)1(b).

e. Each water system that requests that the Division reduce the number and frequency of sampling shall provide the information required under Section 22.607(G)4(d).

2. Source Water Monitoring Reporting Requirements:

a. A water system shall report the sampling results for all source water samples collected in accordance with Section 22.607(I) within the first 10 days following the end of each source water monitoring periods (i.e., annually, per compliance period, per compliance cycle) specified in Section 22.607(I).

b. With the exception of the first round of source water sampling conducted pursuant to Section 22.607(I)2, the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.

3. Corrosion Control Treatment Reporting Requirements: By the applicable dates under Section 22.607(B), systems shall report the following information:

a. for systems demonstrating that they have already optimized corrosion control, information required in Section 22.607(C)3(b) or (c).

b. for systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under Section 22.607(C)1.

c. for systems required to evaluate the effectiveness of corrosion control treatments under Section 22.607(C)3, the information required by that paragraph.

d. for systems required to install optimal corrosion control designated by the Division under Section 22.607(C)4, a letter certifying that the system has completed installing that treatment.

4. Source Water Treatment Reporting Requirements: By the applicable dates in Section 22.607(D), systems shall provide the following information to the Division:

a. if required under Section 22.607(D)2(a) their recommendation regarding source water treatment;

b. for systems required to install source water treatment under Section 22.607(D)2(b), a letter certifying that the system has completed installing the treatment designated by the Division within 24 months after the Division designated the treatment.

5. Lead Service Line Replacement Reporting Requirements: Systems shall report the following information to the Division to demonstrate compliance with the requirements of Section 22.607(E):

a. Within 12 months after a system exceeds the lead action level in sampling referred to in Section 22.607(E)1, the system shall demonstrate in writing to the Division that it has conducted a material evaluation, including the evaluation in Section 22.607(G)1, to identify the initial number of lead service lines in its distribution system, and shall provide the Division with the system's schedule for replacing annually at least 7 percent of the initial number of lead service lines in its distribution system.

b. Within 12 months after a system exceeds the lead action level in sampling referred to in Section 22.607(E)1, and every 12 months thereafter, the system shall demonstrate to the Division in writing that the system has either:

1. replaced in the previous 12 months at least 7 percent of the initial lead service lines (or a greater number of lines specified by the Division under Section 22.607(E)6 in its distribution system; or

2. conducted sampling which demonstrates that the lead concentration in all service lines samples from an individual line(s), taken pursuant to Section 22.607(G)2(c), is less than or equal to 0.015 mg/L. In such cases, the total number of lines replaced and/or which meet the criteria in Section 22.607 (E)2 shall equal at least 7 percent of the initial number of lead lines identified under paragraph (a) of this section (or the percentage specified by the Division under Section 22.607(E)6.

c. The annual letter submitted to the Division under paragraph 5(b) of this section shall contain the following information:

1. the number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule;

2. the number and location of each lead service line replaced during the previous year of the system's replacement schedule;

3. if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.

d. As soon as practicable, but in no case later than three months after a system exceeds the lead action level in sampling referred to in Section 22.607(E)1, any system seeking to rebut the presumption that it has control over the entire lead service line pursuant to Section 22.607(E)4 shall submit a letter to the Division describing the legal authority (e.g., Division statutes, municipal ordinances, public service contracts or other applicable legal authority) which limits the system's control over the service lines and the extent of the system's control.

6. Public Education Program Reporting Requirements: By December 31st of each year, any water system that is subject to the public education requirements in Section 22.607(F) shall submit a letter to the Division demonstrating that the system has delivered the public education materials that meet the content requirements in Section 22.607(F)1 and 2 and the delivery requirements in Section 22.607(F)3. This information shall include a list of all the newspapers, radio stations, television stations, facilities and organizations to which the system delivered public education materials during the previous year. The water system shall submit the letter required by this paragraph annually for as long as it exceeds the lead action level.

7. Reporting of Additional Monitoring Data: Any system which collects sampling data in addition to that required by this section shall report the results to the Division by the end of the applicable monitoring period under Sections 22.607(G), (H) and (I) during which the samples are collected.

K. Recordkeeping Requirements: Any system

subject to the requirements of this subpart shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Division determinations, and any other information required by Section 22.607(B) through Section 22.607(I). Each water system shall retain the records required by this section for no fewer than 12 years.

L. Analytical Methodology:

1. Analysis for lead, copper, pH conductivity, calcium, alkalinity, or the phosphate, silica and temperature shall be conducted using the following methods:

a. Lead: Atomic absorption Furnace Technique using Method 239.2, Method D3559-85D or Method 3113; Inductively Coupled Plasma; Mass Spectrometry using Methods 200.8; or Atomic Absorption, Platform Furnace Technique using Method 200.9 .

b. Copper: Atomic Absorption, Furnace Technique using Method 220.2, Method D1688-90C or Method 3113; Atomic Absorption, Direct Aspiration using Method 220.1, Method D1688-90A or Method 3111-B; Inductively Coupled Plasma using Method 200.7 , or Method 3120; Inductively Coupled Plasma, Mass Spectrometry using Method 200.8 ; or Atomic Absorption, Platform Furnace using Method 200.9

c. pH: Electrometric using Method 150.1, Method 150.2, Method D1293-84B or Method 4500-H.

d. Conductivity: Conductance using Method 120.1, Method D1125-82B or Method 2510.

e. Calcium: EDTA Titrametric using Method 215.2, Method D511-88A or Method 3500-Ca-D; Atomic Absorption, Direct Aspiration using Method 215.1, Method D511-88B or Method 3111-B; or Inductively Coupled Plasma using Method 200.7 or Method 3120.

f. Alkalinity: Titrametric using Method 310.1, Method D1067-88B or Method 2320; or Electrometric Titration using Method I-1030-85.

g. Orthophosphate (Unfiltered No digestion or Hydrolysis): Colorimetric, Automated, Ascorbic Acid using Method 365.1, or Method 4500-P-F; Colorimetric, Ascorbic Acid Two Reagent using Method 365.3, or Method 4500-P-F; Colorimetric, Ascorbic Acid, Single Reagent using Method 365.2, Method D515-88A; Colorimetric Phosphomolybdate using Method I-1601-85; Colorimetric, Automated Segmented Flow using Method I-2601-85; or Colorimetric, Automated Discrete using Method I2598-85; Ion Chromatography using Method 300.0, Method D4327-88 or Method 4110.

h. Silica: Colorimetric, Molybdate Blue using Method I-1700-85; Colorimetric, Automated Segmented Flow using Method I-2700-85; Colorimetric using Method 370.1, or Method D859-88; Molybdosilicate using Method 4500-Si-D; Heterpoly Blue using Method 4500-Si-E, Automated Method for Molybdate-Reactive Silica using Method 4500-Si-F; or Inductively Coupled Plasma using Method 200.7 , or Method 3120.

i. Temperature: Thermometric using Method 2550.

1. The procedures 239.2, 220.2, 220.1, 150.1, 150.2, 120.1, 215.1, 215.2, 310.1, 365.1, 365.3, 365.2, and 370.1 are incorporated by reference and shall be done in accordance with "Methods for Chemical Analysis of Water and Wastes," EPA Environmental Monitoring and Support Laboratory, Cincinnati, OH (EPA-600/4-79-020). Revised March 1983, pp. 239.2-1 through 239.2-2 and metals-1 through metals-19, 220.2-1 through 220.2-2 and metals-1 through metals-19, 220.1-1 through 220.1-2 and metals-1 through metals-19, 150.1-1 through 150.1-3, 150.2-1 through 1502.-3, 120.1-1 through 120.1-3, 215.2-1 through 215.2-3, 215.1-1 through 215.1-2, 310.1-1 through 310.1-3, 365.1-1 through 365.1-9, 365.3-1 through 365.3-4, 365.1-1 through 365.2-6 and 370.1-1 through 370.1-5, respectively. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from ORD Publications, CERI, EPA, Cincinnati, OH 45268. Copies may be inspected at the United State Environmental Protection Agency, 401 M. Street, SW., Room EB-15, Washing, D.C. 29460 or at the Office of the Federal Register, 1100 L. Street, NW., Room 8401, Washington, D.C.

2. The procedures D3559-85D, D1688-90C, D1688-90A, D1293-64B, D1125-82B, D511-88, D1067-88B, D515-88A, D4327-88A, and D859-88 are incorporated by reference and shall be done in accordance with Annual Book of ASTM Standards, Vol 11.01, American Society for Testing and Materials, 1990. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 551(a) and 1 CFR Part 51. Copies may be obtained from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103. Copies may be inspected at the United State Environmental Protection AGency, 401 L. Street, SW., Room EB-15, Washington, D.C. 20460 or at the Office of the Federal Register, 1100 L. Street, NW, Room 8401, Washington, D.C.

3. The procedures 3113, 3111-B, 3120, 4500-11, 2510, 3500-Ca-D, 3120, 2320, 4500-P-F, 4500-P-E, 4110, 4500-Si-D, 4500-Si-E, 4500-Si-F, and 2550 are incorporated by reference and shall be done in accordance with "Standard Methods for the Examination of Water and Wastewater," 17th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1989, pp. 3-43, 3-20 through 3023, 3-53 through 3-63, 4-94 through 4-102, 2-57 through 2-61, 3-85 through 3-87, 2-35 through 2-90, 4-178 through 4-181, 4-117 through 4-178, 4-2 through 4-6, 4-184 through 4-187, 4-188 through 4-189, 4-189 through 4-191,

and 2-60 through 2-81, respectively. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from the American Water Works Association, Customer Service, 6666 West Quincy Avenue, Denver, CO 80235, Phone (303) 794-7711. Copies may be inspected at the United States Environmental Protection Agency, 401 M. Street, SW, Room EB-15, Washington, D.C., 20460 or at the Office of the Federal Register, 1100 L. Street, NW, Room 8401, Washington, D.C.

4. The procedures 1-2001-85, 1-1030-05. 1-1601-85, 12588-85, 1-1700-85, and 1-2700-85 are incorporated by reference and shall be done in accordance with "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," 3rd edition, U.S. Department of Interior, U.S. Geological Survey, 1989, pp. 55-56, 381-382, 383-385, 387-388, 415-416, and 417-419, respectively. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. and 1 CFR Part 51. Copies may be purchased from the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 68225. Copies may be inspected at the United States Environmental Protection Agency, 401 M. Street, SW, Room EB-15, Washing, D.C. 20460 or the Office of the Federal Register, 1100 L. Street, NW, Room 8401, Washington, D.C.

5. "Determination of Metals and Trace Elements in Water and Wastes by Inductively-Coupled Plasma-Mass Spectrometry," Revision 3.2, August 1990, U.S. EPA, EMSL. This document is available from U.S. EPA, EMSL, Cincinnati, OH 45268.

6. "Determination of Trace Elements in Water and Wastes by Inductively-Coupled Plasma-Mass Spectrometry," Method 200.8, August 1990, Revision 4.3, U.S. EPA EMSL. This document is available from U.S. EPA, EMSL, Cincinnati, OH, 45268.

7. "Determination of Trace Elements by Stabilized Temperature Graphite Furnace Atomic Absorption, Spectrometry, " Method 200.9, August 1990, U.S. EPA EMSL. This documents is available from U.S. EPA, EMSL, Cincinnati, OH 45268.

8. "Determination of Inorganic Ions in Water by Ion Chomoatography," Method 300.0, December 1989, U.S. EPA, EMSL. This document is available from U.S. EPA, EMSL, Cincinnati, OH 45268.

9. For analyzing lead and copper, the technique applicable to total metals must be used and samples cannot be filtered. Samples containing less than 1 NTU (nephelometric turbidity unit) and that are properly preserved (conc. HNO3 to pH <2) may be analyzed directly (without digestion) for total metals; otherwise, digestion is required. Turbidity must be measured on the preserved samples just prior to when metal analysis is initiated. When digestion is required, the 'total recoverable' technique as defined in the method must be used.

2. Analyses under this section shall only be conducted by laboratories that have been approved by the EPA or the Division. To obtain certification to conduct analyses for lead and copper, laboratories must:

a. Analyze performance evaluation samples which include lead and copper provided by EPA Environmental Monitoring and Support Laboratory or equivalent samples provided by the Division; and

b. Achieve quantitative acceptance limits as follows:

1. Lead: ±30 percent of the actual amount in the Performance Evaluation sample when the actual amount is greater than or equal to 0.005 mg/L; and

2. Copper: ±10 percent of the actual amount in the Performance Evaluation sample when the actual amount is greater than or equal to 0.050 mg/L;

c. Achieve method detection limits according to the procedures listed in Section 22.607(L)(1) are as follows:

1. Lead: 0.001 mg/L (only if source water compositing is done under Section 22.602(A)4(a)); and

2. Copper: 0.001 mg/L or 0.020 mg/L when atomic absorption direct aspiration is used (only if source water compositing is done under Section 22.602(A)4(a)).

d. Be currently certified by EPA or the Division to perform analyses to the specifications described in paragraph (L)2 of this section.

3. The Division has the authority to allow the use of previously collected monitoring data for purposes of monitoring, if the data were collected and analyzed in accordance with the requirements of this Section.

4. All water systems must report lead measurements between the PQL and the MDL as measured or as one-half the PQL (0.0075 mg/l). All levels below the lead MDL must be reported as zero.

5. All water systems must report copper measurements between the PQL and the MDL as measured or as one-half the PQL (0.025 mg/l). All levels below the copper MDL must be reported as zero.

22.61 Organic Chemical Requirements:

22.611PMCL's: The following are the organic PMCLs (mg/L-milligrams per liter). Compliance is determined pursuant to Sections 22.612, 22.613, and 22.614.

A. The following maximum contaminant levels for synthetic organic contaminants apply to community water systems and not-transient, non-community water systems:

Pesticides and PCBs

Contaminant	MCL
Alachlor	0.002 mg/L
Aldicarb	0.003 mg/L
Aldicarb Sulfone	0.002 mg/L
Aldicarb Sulfoxide	0.004 mg/L
Atrazine	0.003 mg/L
Benzo(a)pyrene	0.0002 mg/L
Carbofuran	0.04 mg/L
Chlordane	0.002 mg/L
Dalapon	0.2 mg/L
Di(2-ethylhexyl) adipate	0.4 mg/L
Di(2-ethylhexyl) phthalate	0.006 mg/L
Dibromochloropropane	0.0002 mg/L
Dinoseb	0.007 mg/L
Diquat	0.02 mg/L
2,4-D	0.07 mg/L
Endothall	0.1 mg/L
Endrin	0.002 mg/L
Ethylenedibromide (EDB)	0.00005 mg/L
Glyphosate	0.7 mg/L
Heptachlor	0.0004 mg/L
Hepachlor epoxide	0.0002 mg/L
Hexachlorobenzene	0.001 mg/L
Hexachlorocyclopentadiene	0.05 mg/L
Lindane	0.0002 mg/L
Methoxychlor	0.04 mg/L
Oxamyl (Vydate)	0.2 mg/L
Pentachlorophenol	0.001 mg/L
Picloram	0.5 mg/L
Polychlorinated biphenyls (PCBs)	0.0005 mg/L
Simazine	0.004 mg/L
2,3,7,8-TCDD (Dioxin)	3 X 10-8 mg/L
Toxaphene	0.003 mg/L
2,4,5-TP (Silvex)	0.05 mg/L

B. Total Trihalomethanes (TTHMs)

Contaminant	MCL
TTHMs	0.10 mg/L

C. Volatile Synthetic Organic Chemicals (VOCs)

Contaminant	MCL
Benzene	0.005 mg/L
Carbon Tetrachloride	0.005 mg/L
0-Dichlorobenzene	0.6 mg/L
P-Dichlorobenzene	0.075 mg/L
1,2 Dichloroethane	0.005 mg/L
1,1 Dichloroethylene	0.007 mg/L
Cis-1,2-Dichloroethylene	0.07 mg/L
Trans 1,2 Dichloroethylene	0.1 mg/L
Dichloromethane	0.005 mg/L
1,2 Dichloropropane	0.005 mg/L
Ethylbenzene	0.7 mg/L
Monochlorobenzene	0.1 mg/L
Styrene	0.1 mg/L
Tetrachloroethylene	0.005 mg/L
Toluene	1 mg/L
1,2,4-Trichlorobenzene	0.07 mg/L
1,1,1-Trichloroethane	0.2 mg/L
1,1,2-Trichloroethane	0.005 mg/L
Trichloroethylene	0.005 mg/L
Vinyl Chloride	0.002 mg/L
Xylenes (total)	10 mg/L

22.612 Sampling, Analytical Requirements and Compliance Determination For Contaminants Listed in 22.611A : Monitoring of the contaminants listed in Section 22.611A for the purposes of determining compliance with the MCLs shall be conducted as follows:

A. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point). Each sample must be

taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

B. Surface water systems shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant. (NOTE: For purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources).

C. If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating condition (i.e., when water representative of all sources is being used).

D. Monitoring frequency:

1. Each community and non-transient non-community water system shall take four consecutive quarterly samples for each contaminant listed in Section 22.611A during each compliance period beginning with the compliance period starting January 1, 1993.

2. Systems serving more than 3,300 persons which do not detect a contaminant in the initial compliance period may reduce the sampling frequency to a minimum of two quarterly samples in one year during each repeat compliance period.

3. Systems serving less than or equal to 3,300 persons which do not detect a contaminant in the initial compliance period may reduce the sampling frequency to a minimum of one sample during each repeat compliance period.

E. Each community and non-transient water system which does not detect a contaminant listed in Section 22.611A may apply to the Division for a waiver from the requirement of paragraph (D)(1) of this section upon completion of the initial monitoring. A system must reapply for a waiver at the end of each compliance period.

F. The Division may grant a waiver after evaluating the following factors: Knowledge of previous use (including transport, storage, or disposal) of the contaminant within the watershed or zone of influence of the system. If a determination by the Division reveals no previous use of the contaminant within the watershed or zone of influence, a waiver may be granted. If previous use of the contaminant is unknown, or it has been used previously, then the following factors shall be used to determine whether a waiver is granted:

1. Previous analytical results.

2. The proximity of the system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facilities or at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities. Non-point sources include the use of pesticides to control insect and weed pests on agricultural areas, forest lands, home and gardens, and other land application uses.

3. The environmental persistence and transport of the pesticide or PCBs.

4. How well the water source is protected against contamination due to such factors as depth of the well, the type of soil and the integrity of the well casing.

5. Elevated nitrate levels at the water supply source.

6. Use of PCBs in equipment used in the production, storage or distribution of water (i.e., PCBs used in pumps, transformers, etc).

G. If an organic contaminant listed in Section 22.611 (A) is detected in any sample then:

1. Each system must monitor quarterly at each sampling point which resulted in a detection.

2. The Division may decrease the quarterly monitoring requirement specified in paragraph (1) of this section provided it has determined that the system is reliably and consistently below the maximum contaminant level. In no case shall the Division make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface water system take a minimum of four quarterly samples.

3. After the Division determines the system is reliably and consistently below the maximum contaminant level the Division may allow the system to monitor annually. Systems which monitor annually must monitor during the quarter that previously yielded the highest analytical result.

4. Systems which have 3 consecutive annual samples with no detection of a contaminant may apply to the Division for a waiver as specified in paragraph (F) of this section.

5. If monitoring results in detection of one or more of certain related contaminants (aldicarb, aldicarb sulfone, aldicarb sulfoxide and heptachlor, heptachlor epoxide), then subsequent monitoring shall analyze for all related contaminants.

H. Systems which violate the MCL listed in Section 22.611A must monitor quarterly. After a minimum of four quarterly samples show the system is in compliance and the Division determines the system to be reliably and consistently below the MCL as specified in paragraph K, the system shall monitor at the frequency specified in paragraph (G)3 of this section.

I. The Division may require a confirmation sample for positive or negative results. If a confirmation sample is required by the Division, the result must be averaged with the first sampling result and the average used for the compliance determination as specified in paragraph

K. The Division has the discretion to delete results of obvious sampling errors from this calculation.

J. The Division may reduce the total number of samples a system must analyze by allowing the use of compositing. Composite samples from a maximum of five sampling points are allowed. Detection Limit must be less than one-fifth of the MCL. Compositing of samples must be done in the laboratory and analyzed within 14 days of sample collections.

1. If the concentration in the composite sample detects one or more contaminants listed in Section 22.611A, then a follow-up sample must be taken and analyzed within 14 days from each sampling point included in the composite.

2. If duplicates of the original sample taken from each sampling point used in the composite are available, the system may use these duplicates instead of resampling. The duplicate must be analyzed and the results reported to the Division within 14 days of collection.

3. If the population served by the system is >3,300 persons, then compositing may only be permitted by the Division at sampling points within a single system. In systems serving <3,300 persons, the Division may permit compositing among different systems provided the 5-sample limit is maintained.

K. Compliance with Section 22.611 shall be determined based on the analytical results obtained at each sampling point.

1. For systems which are conducting monitoring at a frequency greater than annually, compliance is determined by a running annual average of all samples taken at each sampling point. If the annual average of any sampling point is greater than the MCL, then the system is out of compliance. If the initial sample or a subsequent sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any samples below the detection limit shall be calculated as zero for purposes of determining the annual average.

2. If monitoring is conducted annually, or less frequently, the system is out of compliance if the level of a contaminant at any sampling point is greater than the MCL. If a confirmation sample is required by the Division, the determination of compliance will be based on the average of two samples.

3. If a public water system has a distribution system separable from other parts of the distribution system with no interconnections, the Division may allow the system to give public notice to only that portion of the system which is out of compliance.

L. Analysis for the contaminants listed in Section 22.611A shall be conducted using the following EPA methods or their equivalent as approved by EPA. These methods are contained in "Methods for the Determination of Organic Compounds in Drinking Water," ORD Publications, CEKI, EPA/600/4-80/039, December 1988. These documents are available from the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll free number is 1-800-226-4700.

1. Method 504: "1,2-Dibromoethane (EDB) and 2,2-Dibromo-3chloropropane (DBCP) in Water by Microextraction and Gas Chromatography." Method 504 can be used to measure dibromochloropropane (DBCP) and ethylene dibromide (EDB).

2. Method 505: "Analysis of Organohalide Pesticides and Commercial Polychlorinated Biphenyl Products (Aroclors) in Water by Microextraction and Gas Chromatography." Method 505 can be used to measure alachlor, atrazine, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorobenzene, hexachlorocyclopentadiene, lindane, methoxychlor, toxaphene and simazine. Method 505 can be used as a screen for PCBs.

3. Method 507: "Determination of Nitrogen- and Phosphorus-Containing Pesticides in Ground Water by Gas Chromatography with a Nitrogen-Phosphorus Detector." Method 507 can be used to measure alachlor, atrazine and simazine.

4. Method 508: "Determination of Chlorinated Pesticides in Water by Gas Chromatography with an Electron Capture Detector." Method 508 can be used to measure chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorobenzene, lindane, methoxychlor and toxaphene. Method 508 can be used as a screen for PCBs.

5. Method 508A: "Screening for Polychlorinated Biphenyls by Perchlorination and Gas Chromatography." Method 508A is used to quantitate PCBs as decachlorobiphanyl if detected in Methods 505 or 508.

6. Method 515.1: "Determination of Chlorinated Acids in Water by Gas Chromatography with an Electron Capture Detector." Method 515.1 can be used to measure 2,4-D, dalapon, dinoseb, pentachlorophenol, picloram and 2,4,5-TP (Silvex).

7. Method 525.1: "Determination of Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry." Method 525.1 can be used to measure alachlor, atrazine, chlordane, di(2-ethylhexyl)adipate, di(2-ethylhexyl)phthalate, endrin, heptachlor, heptachlor epoxide, hexachlorobenzene, hexachlorocyclopentadiene, lindane, methoxychlor, pentachlorophenol, polynuclear aromatic hydrocarbons, simazine and toxaphene.

8. Method 531.1: "Measurement of N-Methyl Carbamoyloximes and N-Methyl Carbamates in Water by Direct Aqueous Injection HPLC with Post-Column Derivatization." Method 531.1 can be used to measure aldicarb, aldicarb sulfoxide, aldicarb sulfone, carbofuran and oxamyl.

9. Method 1613: "Tetra- through Octa-

Chlorinated Dioxins and Furans by Isotope Dilution." Method 1613 can be used to measure 2,3,7,8-TCDD (dioxin). This method is available from USEPA-OST, Sample Control Center, P.O. Box 1407, Alexandria, VA 22313.

10. Method 547: "Analysis of Glyphosate in Drinking Water by Direct Aqueous Injection HPLC with Post-Column Derivatization." Method 547 can be used to measure glyphosate.

11. Method 548: "Determination of Endothall in Aqueous Samples." Method 548 can be used to measure endothall.

12. Method 549: "Determination of Diquat and Paraquat in Drinking Water by High Performance Liquid Chromatography with Ultraviolet Detection." Method 549 can be used to measure diquat.

13. Method 550: "Determination of Polycyclic Aromatic Hydrocarbon in Drinking Water by Liquid-Liquid Extraction and HPLC with Coupled Ultraviolet and Fluorescence Detection." Method 550 can be used to measure benzo(a)pyrene and other polynuclear aromatic hydrocarbons

14. Method 550.1: "Determination of Polycyclic Aromatic Hydrocarbons in Drinking Water by Liquid-Solid Extraction and HPLC with Coupled Ultraviolet and Fluorescence Detection." Method 550.1 can be used to measure benzo(a)pyrene and other polynuclear aromatic hydrocarbons.

M. Analysis for PCBs shall be conducted as follows:

1. Each system which monitors for PCBs shall analyze each sample using either Method 505 or Method 508 (see paragraph (M)(2) of this section).

2. If PCBs (as one of seven Aroclors) are detected (as designated in this paragraph) in any sample analyzed using Methods 505 or 508, the system shall reanalyze the sample using Method 508A to quantitate PCBs (as decachlorobiphenyl).

AROCLOR	DETECTION limit (mg/l)
1016	0.00008
1221	0.02
1232	0.0005
1242	0.0003
1248	0.0001
1254	0.0001
1260	0.0002

3. Compliance with the PCB MCL shall be determined based upon the quantitative results of analyses using Method 508A.

N. If monitoring data collected after January 1, 1990, are generally consistent with the requirements of Section 22.612, then the Division may allow systems to use that data to satisfy the monitoring requirement for the initial compliance period beginning January 1, 1993.

O. The Division may increase the required monitoring frequency, where necessary, to detect variations within the system (e.g., fluctuations in concentration due to seasonal use, changes in water source).

P. The Division has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.

Q. Each public water system shall monitor at the time designated by the Division within each compliance period.

R. Detection as used in this paragraph shall be defined as greater than or equal to the following concentrations for each contaminant.

Contaminant	Detection Limit
Alachlor	0.0002
Aldicarb	0.0005
Aldicarb sulfoxide	0.0005
Aldicarb sulfone	0.0008
Atrazine	0.0001
Benzo(a)pyrene	0.00002
Carboforan	0.0009
Chlordane	0.0002
Dalapon	0.001
Dibromochloropropane (DBCP)	0.00002
Di (2-ethylhexyl) adipate	0.0006
Di (2-ethylhexyl) phthalate	0.0006
Dinoseb	0.0002
Diquat	0.0004
2,4-D	0.0001
Endothall	0.009
Endrin	0.00001
Ethylene dibromide (EDB)	0.00001
Glyphosate	0.006
Heptachlor	0.00004
Heptachlor epoxide	0.00002
Hexachlorobenzene	0.0001

Hexachlorocyclopentadiene	0.0001
Lindane	0.00002
Methoxychlor	0.0001
Oxamyl	0.002
Picloram	0.0001
Polychlorinated biphenyls (PCBs) (as decachlorobiphenyl)	0.0001
Pentachlorophenol	0.00004
Simazine	0.00007
Toxaphene	0.001
2,3,7,8-TCDD (Dioxin)	0.000000005
2,4,5-TP (Silvex)	0.0002

S. Analysis under this section shall only be conducted by laboratories that have received certification buy EPA or the Division and have met the following conditions:

1. To receive certification to conduct analyses for the contaminants in Section 22.611A the laboratory must:

a. Analyze Performance Evaluation samples which include those substanacess provided by EPA Environmental Monitoring and Support Laboratory or equivalent samples provided by the Division.

b. The laboratory shall achieve quantitative results on the analyses that are within the following acceptance limits:

Contaminant	Acceptance Limits (percent)
DBCP	±40
EDB	±40
Alachlor	±45
Atrazine	±45
Benzo(a)pyrene	2 Standard Deviations
Carbofuran	±45
Chlordane	±45
Dalapon	2 Standard Deviations
Di(2-Ethylhexyl)adipate	2 Standard Deviations
Di(2-Ethylhexyl)phthalate	2 Standard Deviations
Dinoseb	2 Standard Deviations
Diquat	2 Standard Deviations
Endothall	2 Standard Deviations
Endrin	±30
Glyphosate	2 Standard Deviations
Heptachlor	±45
Heptachlor epoxide	±45
Hexachlorobenzene	2 Standard Deviations
Hexachlorocyclopentadiene	2 Standard Deviations
Lindane	±45
Methoxychlor	±45
Oxamyl	2 Standard Deviations
PCBs(as Decachlorobiphenyl)	0 - 200
Picloram	2 Standard Deviations
Simazine	2 Standard Deviations
Toxaphene	±45
Aldicarb	2 Standard Deviations
Aldicarb sulfoxide	2 Standard Deviations
Aldicarb sulfone	2 Standard Deviations
Pentachlorophenol	±50
2,3,7,8-TCDD (Dioxin)	2 Standard Deviations
2,4-D	±50
2,4,5-TP (Silvex)	±50

22.613 Sampling, Analytical Requirements and Compliance Determination for TTHMS: Monitoring of TTHMs for the purpose of determining compliance with the MCL listed in Section 22.611B shall be conducted as follows:

A. Community water systems which serve a population of 10,000 or more individuals and which add a disinfectant (oxidant) to the water in any part of the drinking water treatment process shall analyze for total trihalomethanes in accordance with this Section. For the purpose of this Section, the minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with the Division's approval, be considered one treatment plant for determining the minimum number of samples. All samples taken within an established frequency shall be collected within a twenty-four (24) hour period.

B. For all community water systems utilizing surface water sources in whole or part, and for all community water systems utilizing only ground water

sources that have not been determined by the Division to qualify for the monitoring requirements of paragraphs(E) and (F) of this Section, analyses for total trihalomethanes shall be performed at quarterly intervals on at least four (4) water samples from each treatment plant used by the systems. At least twenty-five (25) percent of the samples shall be taken at locations within the distribution system reflecting the maximum residence time of the water in the system. The remaining seventy-five (75) percent shall be taken at representative locations in the distribution system taking into account number of persons served, different sources of water and different treatment methods employed. The results of all analyses per quarter shall be arithmetically averaged and reported to the division within thirty (30) days of the system's receipt of such results. All samples collected shall be used in the computation of the average, unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in paragraph H of this Section.

C. The monitoring frequency required by paragraph B of this Section may be reduced by the Division to a minimum of one (1) sample analyzed for TTHMs per quarter taken at a point in the distribution system reflecting the maximum residence time of the water in the system, upon written determination by the Division that the data from at least one (1) year of monitoring in accordance with paragraph B of this Section and local conditions demonstrate that total trihalomethane concentrations will be consistently below the PMCL.

D. If at any time during which the reduced monitoring frequency prescribed under this paragraph applies, the results from any analysis exceed 0.10 mg/L of TTHMs and such results are confirmed by at least one (1) check sample taken promptly after such results are received, or if the system makes any significant change to its source of water or treatment program, the system shall immediately begin monitoring in accordance with the requirements of paragraph B of this Section, which monitoring shall continue for at least one (1) year before the frequency may be reduced again. At the option of the Division, a system's monitoring frequency may and should be increased above the minimum in those cases where it is necessary to detect variations of TTHM levels within the distribution system.

E. The monitoring frequency required by paragraph B of this Section may be reduced by the Division for ground water supplies to a minimum of one (1) sample for maximum TTHM potential per year for each treatment plant used by the system taken at a point in the distribution system reflecting maximum residence time of the water in the system. The system shall submit to the Division the results of at least one (1) sample analyzed for maximum TTHM potential for each treatment plant used by the system taken at a point in the distribution system. The system's monitoring frequency may only be reduced by the Division when, based upon the data, the system has a maximum TTHM potential of less than 0.10 mg/L and when, based upon an assessment of local conditions of the system, the system is not likely to approach or exceed the PMCL for TTHMs. The results of all analyses shall be reported to the Division within thirty (30) days of the system's receipt of such results. All samples collected shall be used for determining whether the system must comply with the monitoring requirements of paragraphs B, C and D of this Section, unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in paragraph (H) of this Section.

F. If at any time during which the reduced monitoring frequency prescribed under paragraph E of this Section applies, the results from any analyses taken by the system for maximum TTHM potential are equal to or greater than 0.10 mg/L, and such results are confirmed by at least one (1) check sample taken promptly after such results are received, the system shall immediately begin monitoring in accordance with the requirements of paragraphs B, C and D of this Section and such monitoring shall continue for at least one (1) year before the frequency may be reduced again. In the event of any significant change to the system's raw water or treatment program, the system shall immediately analyze an additional sample for maximum TTHM potential taken at a point in the distribution system reflecting maximum residence time of the water in the system for the purpose of determining whether the system must comply with the monitoring requirements of paragraphs B, C and D of this Section. At the option of the Division, monitoring frequencies may and should be increased above the minimum in those cases where this necessary to detect variations of TTHM levels within the distribution system.

G. Compliance with Section 22.611B shall be determined based on running annual average of quarterly samples collected by the system as prescribed in paragraphs B or C of this Section. If the average of samples covering any twelve (12) month period exceeds the PMCL, the supplier of water shall report to the Division pursuant to Section 22.40 and notify the public pursuant to Section 22.41. Monitoring after public notification shall be at a frequency designated by the Division and shall continue until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

H. Sampling and analyses pursuant to this Section shall be conducted by one of the following EPA approved methods:

1. "The Analysis of Trihalomethanes in Drinking Waters by the Purge and Trap Method," Method 501.1, EMSL, EPA, Cincinnati, Ohio.

2. "The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction," Method 501.2, EMSL, EPA, Cincinnati, Ohio.

I. Samples taken pursuant to 1 and 2 above, for TTHMs, shall be dechlorinated upon collection to prevent further production of trihalomethanes, according to the procedures described in the above two methods. Samples for maximum TTHM potential should not be dechlorinated, and should be held for seven (7) days at 25 C or above prior to analysis, according to the procedures described in the above (2) methods.

3. Any alternate analytical technique approved by the Division.

J. Before a community water system makes any significant modifications to its existing treatment process for the purposes of achieving compliance with Section 22.611B, such system must submit and obtain Division approval of a detailed plan setting forth its proposed modification and those safeguards that it will implement to ensure that the bacteriological quality of the drinking water served by such system will not be adversely affected by such modification. Each system shall comply with the provisions set forth in the Division approved plan. At a minimum, a Division approved plan shall require the system modifying its disinfection practice to:

1. Evaluate the water system for sanitary defects and evaluate the source water for biological quality.

2. Evaluate its existing treatment practice and consider improvements that will minimize disinfectant demand and optimize finished water quality throughout the distribution system.

3. Provide baseline water quality survey data of the distribution system. Such data should include the results from monitoring for coliform and fecal coliform bacteria, fecal streptococci, standard plate counts at 35ºC and 20ºC, phosphate, ammonia, nitrogen and total organic carbon. Virus studies should be required where source waters are heavily contaminated with sewage effluent.

4. Conduct additional monitoring to assure continued maintenance of optimal biological quality in finished water, for example, when chloramines are introduced as disinfectants or when pre-chlorination is being discontinued. Additional monitoring should also be required by the Division for chlorate, chlorite and chlorine dioxide when chlorine dioxide is used as a disinfectant. Standard plate count analyses should also be required by the division as appropriate before and after any modifications.

5. Demonstrate an active disinfectant residual throughout the distribution system at all times during and after the modification.

22.614 Sampling, Analytical Requirements and Compliance Determination for VOC's: Monitoring of the contaminants listed in Section 22.611C for the purpose of determining compliance with the MCLs shall be conducted as follows:

A. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point). If conditions warrant, the Division may designate additional sampling points within the distribution system or at the consumer's tap which more accurately determine consumer exposure. Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

B. Surface water systems shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (hereafter called a sampling point). If conditions warrant, the Division may designate additional sampling points within the distribution system or at the consumer's tap which more accurately determines consumer exposure. Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plan, or within the distribution system. NOTE: For purposes of this paragraph, surface water systems include systems with a combination of surface and ground surfaces.

C. If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water representative of all sources is being used).

D. Each community and non-transient non-community water system shall take four consecutive quarterly samples for each contaminant listed in Section 22.611C, during each compliance period beginning in the initial compliance period.

E. Groundwater and surface water systems which do not detect one of the contaminants listed in Section 22.611C after conducting the initial round of monitoring required in paragraph D of this Section may take one sample annually.

F. For groundwater and surface water systems, if the initial monitoring for contaminants listed in Section 22.611C as allowed in paragraph R of this section has been completed by December 31, 1992 and the system did not detect any contaminant listed in Section 22.611C then the system shall take one sample annually. After a minimum of three years of annual sampling, the Division may allow groundwater systems which have no previous detection of any contaminant listed in Section 22.611C to take one sample during each compliance period.

G. Each community and non-transient non-community groundwater system which does not detect a contaminant listed in Section 22.611C may apply to the Division for a waiver from the requirement of paragraph E and F of this Section after completing the initial monitoring. (For the purposes of this section, detection is defined as >0.0005 mg/L). A waiver shall be effective for no more than six years (two compliance periods).

1. The Division may also issue waivers to small systems (those serving ≤3,300 persons) for the initial round of monitoring for 1,2,4-trichlorobenzene.

H. The Division may grant a waiver after evaluating the following factor(s):

1. Knowledge of previous use (including transport, storage, or disposal) of the contaminant within the watershed or zone of influence of the system. If a determination by the Division reveals no previous use of the contaminant within the watershed or zone of influence, a waiver may be granted.

2. If previous use of the contaminant is unknown or it has been used previously, then the following factors shall be used to determine whether a waiver is granted.

a. Previous analytical results.

b. The proximity of the system to potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities.

c. The environmental persistence and transport of the contaminants.

d. The number of persons served by the public water system and the proximity of a smaller system to a larger system.

e. How well the water source is protected against contamination such as whether it is a surface or groundwater system. Groundwater systems must consider factors such as depth of the well, the type of soil, and well head protection. Surface water systems must consider watershed protection.

I. As a condition of the waiver a system must take one sample at each sampling point during the time the waiver is effective (i.e., one sample during two compliance periods or six years) and update its vulnerability assessment considering the factors listed in paragraph H of this section. Based on this vulnerability assessment the Division must confirm that the system is non-vulnerable. If the Division does not make this reconfirmation within three years of the initial determination, then the waiver is invalidated and the system is required to sample annually as specified in paragraph E of this section.

J. Each community and not-transient non-community surface water system which does not detect a contaminant listed is Section 22.611C may apply to the Division for a waiver from the requirements of Paragraph F of this Section after completing the initial monitoring. Composite samples from a maximum of five sampling points are allowed, provided that the detection limit of the method used for analysis is less than one-fifth of the MCL. Systems meeting this criterion must be determined by the Division to be non-vulnerable based on a vulnerability assessment during each compliance period. Each system receiving a waiver shall sample at the frequency specified by the Division (if any).

K. If a contaminant listed in Section 22.611C, excluding vinyl chloride, is detected at a level exceeding 0.0005 mg/L in any sample then:

1. The system must monitor quarterly at each sampling point which resulted in a detection.

2. The Division may decrease the quarterly monitoring requirement specified in paragraph K(1) of this section provided it has determined that the system is reliably and consistently below the maximum contaminant level. In no case shall the Division make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface water system takes a minimum of four quarterly samples.

3. If the Division determines that the system is reliably and consistently below the MCL, the Division may allow the system to monitor annually. Systems which monitor annually must monitor during the quarter(s) which previously yielded the highest analytical result.

4. Systems which have three consecutive annual samples with no detection of a contaminant may apply to the Division for a waiver as specified in paragraph G of this section.

5. Groundwater systems which have detected one or more of the following two-carbon organic compounds: trichloroethylene, tetrachloroethylene, 1,2-dichloroethane, trans-1,2-dichloroethylene, 1,1,1-trichloroethane, cis-1,2-dichloroethylene or 1,1-dichloroethylene shall monitor quarterly for vinyl chloride. A vinyl chloride sample shall be taken at each sampling point at which one or more of the two-carbon organic compounds was detected. If the results of the first analysis do not detect vinyl chloride, the Division may reduce the quarterly monitoring frequency of vinyl chloride monitoring to one sample during each compliance period. Surface water systems are required to monitor for vinyl chloride as specified by the Division.

L. Systems which violate the requirements of Section 22.611C as determined by paragraph O of this section must monitor quarterly. After a minimum of four consecutive quarterly samples shows the system is in compliance as specified in paragraph O of this Section, and the Division determines that the system is reliably and consistently below the maximum contaminant level, the system may monitor at the frequency and time specified in paragraph K (3) of this section.

M. The Division may require a confirmation sample for positive or negative results. If a confirmation sample is required by the Division, the result must be averaged with the first sampling result and the average is used for the compliance determination as specified by Paragraph O of this Section. The Division has the discretion

to delete results of obvious sampling errors from this calculation.

N. The Division may reduce the total number of samples a system must analyze by allowing the use of compositing. Composite samples from a maximum of five sampling points are allowed, providing that the detection limit of the method used for analysis is less than one-fifth of the MCL. Compositing of samples must be done in the laboratory and analyzed within 14 days of sample collection.

1. If the concentration in the composite sample is >0.0005 mg/L for any contaminant listed in Section 22.611C, then a follow-up sample must be taken and analyzed within 14 days from each sampling point included in the composite.

2. If duplicates of the original sample taken from each sampling point used in the composite are available, the system may use these instead of resampling. The duplicate must be analyzed and the results reported to the Division within 14 days of collection.

3. If the population served by the system is >3,300 persons, then compositing may only be permitted by the Division at sampling points within a single system. In systems serving <3,300 persons, the Division may permit compositing among different systems provided the 5-sample limit is maintained.

4. Compositing samples prior to GC analysis:

a. Add 5 ml or equal larger amounts of each sample (up to 5 samples are allowed) to a 25 ml glass syringe. Special precautions must be made to maintain zero headspace in the syringe.

b. The samples must be cooled at 4o C during this step to minimize volatilization losses.

c. Mix well and draw out a 5-ml aliquot for analysis.

d. Follow sample introduction, purging and desorption steps described in the method.

e. If less than five samples are used for compositing, a proportionately small syringe may be used.

5. Compositing samples prior to GC/MS analysis:

a. Inject 5-ml or equal larger amounts of each aqueous sample (up to 5 samples are allowed) into a 25-ml purging device using the sample introduction technique described in the method.

b. The total volume of the sample in the purging device must be 25 ml.

c. Purge and desorb as described in the method.

O. Compliance with Section 22.611C shall be determined based on the analytical results obtained at each sampling point:

1. For systems which are conducting monitoring at a frequency greater than annual, compliance is determined by a running annual average of all samples taken at each sampling point. If the annual average of any sampling point is greater than the MCL, then the system is out of compliance. If the initial sample or a subsequent sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any samples below the detection limit shall be calculated as zero for purposes of determining the annual average.

2. If monitoring is conducted annually, or less frequently, the system is out of compliance if the level of a contaminant at any sampling point is greater than the MCL. If a confirmation sample is required by the Division, the determination of compliance will be based on the average of two samples.

3. If a public water system has a distribution system separable from other parts of the distribution system with no interconnections, the Division may allow the system to give public notice to only that area served by that portion of the system which is out of compliance.

P. Analysis for the contaminants listed in Section 22.611C shall be conducted using the following EPA methods or their equivalent as approved by EPA. These methods are contained in "Methods for the Determination of Organic Compounds in Drinking Water," ORD Publications, CERI, EPA/600/4-88/039. These documents are available from the National Technical Information Service (NTIS) NTIS PB91-231480 and PB91-146027, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll-free number is 1-800-336-4700.

1. Method 502.1: "Volatile Halogenated Organic Chemicals in Water by Purge and Trap Gas Chromatography."

2. Method 502.2: "Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series."

3. Method 503.1: "Volatile Aromatic and Unsaturated Organic Compounds in Water by Purge and Trap Gas Chromatography."

4. Method 524.1: "Measurement of Purgeable Organic Compounds in Water by Purged Column Gas Chromatography/Mass Spectrometry."

5. Method 524.2: "Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry."

Q. Analysis under this section shall only be conducted by laboratories that have received approval by EPA or the Division according to the following conditions:

1. To receive conditional approval to conduct analyses for the contaminants in Section 22.611 C, excluding vinyl chloride, the laboratory must:

a. Analyze Performance Evaluation samples which include these substances provided by EPA Environmental Monitoring and Support Laboratory or

equivalent samples provided by the Division.

b. Achieve the quantitative acceptance limits for at least 80 percent of the regulated organic chemicals listed in Section 22.611 C.

c. Achieve quantitative results on the analyses performed under paragraph (P) of this section that are within ±20 percent of the actual amount of the substances in the Performance Evaluation sample when the actual amount is greater than or equal to 0.010 mg/L.

d. Achieve quantitative results on the analyses performed under paragraph (P) of this section that are within ±40 percent of the actual amount of the substance in the Performance Evaluation sample when the actual amount is less than 0.010 mg/L.

e. Achieve a method detection limit of 0.0005 mg/L according to the procedures listed in Appendix B of 40 CFR Part 136.

(1). {Reserved}.

2. To receive certification for vinyl chloride, the laboratory must:

a. Analyze Performance Evaluation samples provided by the EPA Environmental Monitoring Systems or equivalent samples provided by the State.

b. Achieve quantitative results on the analyses performed under paragraph (2) (a) of this Section that are within ±40 percent of the actual amount of vinyl chloride in the Performance Evaluation sample.

c. Achieve a method detection limit of 0.0005 mg/l, according to the procedures listed in Appendix B of 40 CFR Part 136.

d. Obtain certification for the contaminants listed in Section 22.611 (C).

3. Laboratories may conduct sample analysis under provisional certification until January 1, 1996.

R. The Division may allow the use of monitoring data collected after January 1, 1988 for purposes of initial monitoring compliance. If the data are generally consistent with the other requirements in this section, the Division may use those data (i.e., a single sample rather than four quarterly samples) to satisfy the initial monitoring requirement of paragraph D of this section.

1. Systems which use grandfathered samples and did not detect any contaminant listed in Section 22.611 (C), excluding vinyl chloride, shall begin monitoring annually in accordance with paragraph (F) of this Section beginning with the initial compliance period.

S. The Division may increase required monitoring where necessary to detect variations within the system.

T. Each approved laboratory must determine the method detection limit (MDL), as defined in Appendix B of 40 CFR Part 136, at which it is capable of detecting VOCs. The acceptable MDL is 0.0005 mg/L. This concentration is the detection concentration for purposes of this section.

U. Each public water system shall monitor at the time designated by the Division within each compliance period.

22.62 Unregulated Contaminants

22.621 Sampling and Analytical Methodology For Unregulated Volatile Organic Contaminants: Monitoring of the contaminants listed in Paragraph E of this Section shall be conducted as follows:

A. All CWSs and NTNCWSs shall monitor for the contaminants listed in paragraph E of this Section by the Date Specified in the table below:

System Population	Begin No Later Than
Greater than 10,000	First Calendar Quarter of 1989
3,300 - 10,000	First Calendar Quarter of 1989
Less than 3,300	First Calendar Quarter of 1991

B. Surface water systems shall sample in the distribution system representative of each water source or at entry points to the distribution system. The minimum number of samples in one (1) year of quarterly samples per water source.

C. Ground water systems shall sample at points of entry to the distribution system representative of each well. The minimum number of samples in one (1) sample per entry point to the distribution system.

D. The Division may require confirmation samples for positive or negative results.

E. CWSs and NTNCWSs shall monitor for the following contaminants:

Bromobenzene	Dibromomethane
Bromodichloromethane	m-Dichlorobenzene
Bromoform	1,1-Dichloroethane
Bromomethane	1,1-Dichloropropene
Chlorobenzene	1,3-Dichloropropene
Chlorodibromomethane	1,3-Dichloropropane
Chloroethane	2,2-Dichloropropane
Chloroform	1,1,1,2-Tetrachloroethane
Chloromethane	1,1,2,2-Tetrachloroethane
o-chlorotoluene	1,2,3-Trichloropropane
p-chlorotoluene	

F. {Reserved}

G. Analysis for the contaminants listed in Section 22.621 E and J shall be conducted using the following EPA methods or their equivalent as approved by EPA. These methods are contained in "Methods for the Determination of Organic Compounds in Drinking Water," ORD Publications, CERI, EPA/600/4-88/039, December 1988. These

documents are available from the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll-free number is 1-800-336-4700.

1. Method 502.1: "Volatile Halogenated Organic Chemicals in Water by Purge and Trap Gas Chromatography."

2. Method 502.2: "Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with Photoionization and electrolytic Conductivity Detectors in Series."

3. Method 503.1: "Volatile Aromatic and Unsaturated Organic Compounds in Water by Purge and Trap Gas Chromatography."

4. Method 524.1: "Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography/Mass Spectrometry."

5. Method 524.2: "Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography/Mass Spectrometry."

H. Any alternate analytical technique approved by the United States Environmental Protection Agency.

I. Analyses for contaminants listed is 22.621 E may be conducted only by laboratories approved under Section 22.614 Q.

J. Monitoring for the following compounds is required at the discretion of the Division:

Bromochloromethane	n-Propylbenzene
n-Butylbenzene	Secbutylbenzene
Dichlorodifluoromethane	Tertbutylbenzene
Fluorotrichloromethane	1,2,3-Trichlorobenzene
Hexachlorobutadene	1,2,4-Trichlorobenzene
Isopropylbenzene	1,2,4-Trimethylbenzene
p-Isopropyltoluene	1,3,5-Trimethylbenzene
Naphthalene	

22.622 Sampling and Analytical Methodology For Unregulated Synthetic and Inorganic Contaminants: Monitoring of the contaminants listed in Paragraphs (K) and (L) of this section shall be conducted as follows:

A. Each community (CWS) and non-transient, non-community (NTNCWS) water system shall take four consecutive quarterly samples at each sampling point for each contaminant listed paragraph (K) of this section and report the results to the Division. Monitoring must be completed by December 31, 1995.

B. Each CWS and NTNCWS shall take one sample at each sampling point for each contaminant listed in paragraph (L) of this section and report the results to the Division. Monitoring must be completed by December 31, 1995.

C. Each CWS and NTNCWS may apply to the Division for a waiver from the requirements of paragraphs (A) and (B) of this section.

D. The Division may grant a waiver for the requirement of paragraph (A) of this section based on the criteria specified in Section 22.614 paragraph (H). The Division may grant a waiver from the requirement of paragraph (B) of this section if previous analytical results indicate contamination would not occur, provided this data was collected after January 1, 1990.

E. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

F. Surface water systems shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
NOTE:For purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources.

G. If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water representative of all sources is being used).

H. The Division may require a confirmation sample for positive or negative results.

I. The Division may reduce the total number of samples a system must analyze by allowing the use of compositing. Composite samples from a maximum of five sampling points are allowed. Compositing of samples must be done in the laboratory and the composite sample must be analyzed within 14 days of collection. If the population served by the system is >3,300 persons, then compositing may only be permitted by the Division at sampling points within a single system. In systems serving $\leq$3,300 persons, the Division may permit compositing among different systems provided the 5-sample limit is maintained.

J. Instead of performing the monitoring required by this section, a CWS or NTNCWS serving fewer than 150 service connections may send a letter to the Division stating that the system is available for sampling. This letter must be sent to the Division by January 1, 1994. The system shall not send such sample to the Division, unless requested to do so by the Division.

K. List of Unregulated Synthetic Organic Contaminants:

Organic Contaminants	EPA Analytical Methods
Aldrin	505, 508, 525
Butachlor	507, 525
Carbaryl	531.1
Dicamba	515.1
Dieldrin	505, 508, 525
3-Hydroxycarbofuran	531.1
Methomyl	531.1
Metolachlor	507, 525
Metribuzin	507, 508, 525
Propachlo	507, 525

L. List of Unregulated Inorganic Contaminants:

Contaminant	EPA analytical method
(i) Colorimetric.	Sulfate

M. Any alternate analytical technique approved by the United States Environmental Protection Agency.

22.63 Best Available Technologies (BAT)

A. The Division hereby identifies as indicated in the table below either granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX) through chlorination or ozonation as the best technology, treatment technique, or other means available for achieving compliance with the maximum contaminant level for organic contaminants identified in Section 22.611 paragraphs (A) and (C).

BAT for Organic Contaminants Listed in Section 22.611 (A) and (C)

Chemical	gac	pta	ox
Alachlor		X	
Aldicarb		X	
Aldicarb sulfone		X	
Aldicarb sulfoxide		X	
Atrazine		X	
Benzene		X	X
Benzo(a)pyrene	X		
Carbofuran		X	
Carbon tetrachloride		X	X
Chlordane		X	
2,4-D	X		
Dalapone	X		
Dibromochloropropane (DBCP)		X	X
o-Dichlorobenzene	X	X	
1,2-Dichloroethane	X	X	
cis-1,2-Dichloroethylene	X	X	
trans-1,2-Dichloroethylene	X	X	
1,1-Dichloroethylene	X	X	
Dichloromethane		X	
1,2-Dichloropropane	X	X	
Di(2-ethylhexyl)adipate	X	X	
Di(2-ethylhexyl)phthalate	X		
Dinoseb	X		
Diquat	X		
Endothall	X		
Endrin	X		
Ethylene Dibromide (EDB)		X	X
Ethylbenzene		X	X
Glyphosate			X
Heptachlor		X	
Heptachlor epoxide		X	
Hexachlorobenzene	X		

BAT for Organic Contaminants Listed in Section 22.611 (A) and (C) (Cont.)

Chemical	gac	pta	ox
Hexachlorocyclopentadiene	X	X	
Lindane		X	
Methoxychlor		X	
Monochlorobenzene		X	X
Oxamyl (Vydate)	X		
para-Dichlorobenzene	X		
Polychlorinated biphenyls (PCB)		X	
Pentachlorophenol		X	
Picloram		X	
Simazine	X		
Styrene	X		
2,4,5-TP (Silvex)		X	X
Tetrachloroethylene		X	X
1,2,4-Trichlorobenzene	X	X	
1,1,1-Trichloroethane	X	X	
1,1,2-Trichloroethane	X	X	
Trichloroethylene		X	X
Toluene		X	
Toxaphene		X	X
2,3,7,8-TCDD (Dioxin)	X		
Vinyl chloride		X	
Xylene		X	X

B. BAT for Inorganic Contaminants Listed in Section 22.601 (A)

Chemical Name	BAT(s)
Antimony	2,7
Asbestos	2,3,8
Barium	5,6,7,9
Beryllium	1,2,5,6,7
Cadmium	2,5,6,7
Chromium	2,5,62,7
Cyanide	5,7,10
Mercury	21,4,61,71
Nickel	5,6,7
Nitrate	5,7,9
Nitrite	5,7
Selenium	1,23,6,7,9
Thallium	1,5

1 BAT only if influent Hg concentrations <10 ug/l
2 BAT for Chromium III only.
3 BAT for Selenium IV only.

Key to BATs in Table
1 = Activated Alumina
2 = Coagulation/Filtration
3 = Direct and Diatomite Filtration
4 = Granular Activated Carbon
5 = Ion Exchange
6 = Lime Softening
7 = Reverse Osmosis
8 = Corrosion Control
9 = Electrodialysis
10 = Chlorine
11 = Ultraviolet

C. Treatment techniques for acrylamide and epichlorohydrin.

1. Each public water system must certify annually in writing to the Division (using a third party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the levels specified as follows:

- Acrylamide =0.05% dosed at 1 PPM (or equivalent).
- Epichlorohydrin =0.01% dosed at 20 PPM (or equivalent).

22.64 Maximum Contaminant Level (MCL) Effective Dates:

Fluoride - October 2, 1987
Phase I (VOCs) - January 9, 1989
Phase II - July 30, 1992
Phase IIB - January 1, 1993
Phase V - January 17, 1994

SECTION 22.7 TURBIDITY AND CORROSIVITY

22.70 Turbidity MCL, Sampling and Analytical Methodology (Effective no later than June 29, 1993)

22.701 Turbidity MCL: The PMCLs for turbidity are applicable to both CWSs and NCWSs utilizing surface water sources in whole or in part. The PMCLs for turbidity in drinking water, measured at a representative entry point(s) to the distribution system are:

A. One (1) NTU, as determined by a monthly average pursuant to Section 22.702, except that five (5) or fewer NTUs may be allowed if the supplier of water can demonstrate to the Division that the higher turbidity does not do any of the following:

1. Interfere with disinfection;

2. Prevent maintenance of an effective disinfectant agent throughout the distribution system or;

3. Interfere with microbiological determinations.

B. Five (5) NTUs based on an average for two (2) consecutive days pursuant to Section 22.702.

22.702 Turbidity Sampling and Analytical Methodology:

A. Samples shall be taken by suppliers of water for both CWSs and NCWSs using surface water in whole or in part at a representative entry point(s) to the water distribution system at least once per day, for the purpose of making turbidity measurements to determine compliance with Section 22.701. The turbidity measurements shall be made by Method 214A (Nephelometric Method-Nephelometric Turbidity Units), pp. 134-136, as set forth in Standard Methods for the Examination of Water and Wastewater, 1986, American Public Health Association et al., 16th edition, or any alternate analytical technique approved by the Division.

B. If the result of a turbidity analysis indicates that the MCL has been exceeded, the sampling and measurement shall be confirmed by resampling as soon as practicable and preferably within one (1) hour. If the repeat sample confirms that the MCL has been exceeded, the supplier of water shall report to the Division within forty-eight (48) hours. The repeat sample shall be the sample used for the purpose of calculating the monthly average. If the monthly average of the daily samples exceeds the MCL, or if the average of two (2) samples taken on consecutive days exceeds five (5) NTU, the supplier of water shall report to the Division and notify the public as directed in Section 22.40 and Section 22.41.

C. When required by the Division, samples shall be taken by suppliers of water for both CWSs and NCWSs utilizing ground water only, at representative points in the distribution system.

22.71 Corrosivity Sampling, Reporting and Analytical Methodology: Suppliers of water for community public water systems shall collect samples from a representative entry point to the water distribution system for the purpose of analyses to determine the corrosivity characteristics of the water.

22.711 Sampling Requirements: For water suppliers utilizing surface water wholly or in part, two (2) samples per plant are required, one (1) during mid-winter and one (1) during mid-summer. For water suppliers utilizing wholly ground water sources, one (1) sample per plant per year shall be required.

A. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may be considered one (1) treatment plant for determining the minimum number of samples.

B. Determination of the corrosivity characteristics of the water shall include measurement of pH, calcium hardness, alkalinity, temperature, total dissolved solids (total filterable residue) and the calculation of the Langelier Index (LI) in accordance with Section 22.713A. The determination of corrosivity characteristics shall only include one (1)round of sampling (two (2) samples per plant for surface water and one sample per plant for ground water sources). However, the Division may require addition or more frequent monitoring as appropriate. In addition, the Division has the discretion to require monitoring for additional parameters which may indicate corrosivity characteristics such as sulfates and chlorides. In certain cases, the Aggressive Index (AI) as described in Section 22.713B can be used instead of the LI. The Division will make this determination. Waters exhibiting a LI of less than -2.0 or an AI of less than 10.0 shall be considered highly corrosive/aggressive.

22.712 Reporting to the Division: The supplier of water shall report to the Division the results of the analyses for corrosivity characteristics pursuant to Section 22.401.

22.713 Analytical Methodology: Analyses conducted to determine the corrosivity of the water shall be made in accordance with the following methods:

A. Langelier Index -- "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 203, pp. 61-63.

B. Aggressive Index -- "AWWA Standard for Asbestos-Cement Pipe, 4 in. through 24 in. for Water Other Liquids," AWWA C400-77, Revision of C400-75, AWWA, Denver, Colorado.

C. Total Filterable Residue -- "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 208B, pp. 92-92; or "Methods of Chemical Analysis of Water and Wastes," Method 160.1.

D. Temperature -- "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 212, pp 125-126.

E. Calcium -- EDTA Titrimetric Method "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 306C, pp. 189-191; or "Annual Book of ASTM Standards," Method D-1126-67B; "Methods for Chemical Analysis of Water and Wastes," Method 215.2.

F. Alkalinity -- Methyl Orange end point pH 4.5 "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 403, pp. 278-281; or "Annual Book of ASTM Standards," Method D1067-70B; or Methods for Chemical Analysis of Water and Wastes," Method 310.1.

G. pH -- "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 424, pp. 460-465; or "Methods for Chemical Analysis of Water and Wastes," Method 150.1; or "Annual Book of ASTM Standards," Method D-1293-78A or B.

H. Chloride -- Potentiometric Method, "Standard Methods for the Examination of Water and Wastewater," 14th Edition, p.306.

I. Sulfate -- Turbidimetric Method, "Methods for Chemical Analysis of Water and Wastes," pp. 277-278, EPA, Office of Technology Transfer, Washington, D.C. 20460, 1974, or "Standard Methods for the Examination of Water and Wastewater," 14th Edition, pp. 496-498.

J. Any alternate analytical technique approved by the Division.

22.714Reporting of Construction Materials: PWSs shall identify whether the following construction materials are present in their distribution system and report to the Division:

A. Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing.

B. Copper from piping and alloys, service lines and home plumbing.

C. Galvanized piping, service lines and home plumbing.

D. Ferrous piping materials such as cast iron and steel.

E. Asbestos cement pipe.

F. Vinyl lined asbestos cement pipe.

G. Coal tar lined pipes and tanks.

H. In addition, the Division may require identification and reporting of other materials of construction present in distribution systems that may contribute contaminants to the drinking water.

SECTION 22.8 PUBLIC WATER SYSTEM CLASSIFICATION AND TREATMENT REQUIREMENTS

22.801 ~~Water System Classification:~~ Regulatory Classification:

A. Class I - All public water systems shall:

1. Meet all bacteriological requirements;

2. Meet the nitrate and nitrite requirements and;

3. Conform with provisions of Section 22.5.

B. Class II - All public water systems as definted in 22.157(A) and (B) shall:~~which are not community water systems that regularly serve at least twenty-five (25) of the same people over six (6) months per year shall:~~

1. Meet all the Class I requirements and;

2. Meet all ~~Synthetic Organic requirements and~~other Primary Standards and;

3. Meet all requirements of Section 22.607.

C. Class III - All public water systems as defined in 22.157 (A) and serve more than 500 service connections within the state shall:~~which serve fifteen (15) or more service connections used by year-round residents or regularly serve twenty-five (25) or more year-round residents shall:~~

1. Meet all Class I requirements and;

2. Meet all Class II requirements and;

3. Meet all other primary and secondary standards ~~requirements~~.

NOTE - All public water systems should meet all secondary MCLs.

22.802 Disinfection: When it is specifically required by these regulations, or when it is deemed to be required to ensure compliance with Section 22.304 or where it is demonstrated through bacteriological testing that there is a need for disinfection, continuous disinfection shall be provided. The disinfection shall be chlorine, unless a substitute is approved prior to installation. Plans and specifications for the disinfection system shall be approved in accordance with Section 22.211. When the disinfection is instituted, it shall be operated such that a free chlorine residual of at least 0.3 mg/L is maintained throughout the water distribution system. The supplier of water shall keep accurate records of the amount of chlorine used and shall have an approved test kit for measuring both free and total chlorine residuals. The supplier of water shall be required to conduct chlorine residual testing at least daily, and shall report these results to the Division on a monthly basis in accordance with Section 22.401. If a substitute disinfectant is approved, the operational and monitoring requirements shall be specified by the Division.

SECTION 22.9 RADIOACTIVITY

22.91 Limits

22.911 Primary MCLs for Radium 226, 228 and Gross Alpha Particles:

A. The PMCL for radium 226 and 228 combined is five (5) pCi per liter.

B. The PMCL for gross particle activity

(including radium 226 but excluding radon and uranium) is fifteen (15) pCi per liter.

22.912 Beta Particle and Photon Concentration Limits: The average annual concentration of beta particle and photon radioactivity for man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirems per year. Except for those listed in the Table below, the concentration causing four (4) millirems total body or organ dose equivalents shall be calculated on the basis of a two (2) liters per day drinking water intake using the 168 hour data listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," NBS Handbook 69 as amended August 1963, U.S. Department of Commerce. If two (2) or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed four (4) millirems per year.

Average Annual Concentrations Assumed to

Produce a Total Body or Organ dose of 4 Millirems/ Year

Radionuclide	Critical Organ	pCi/L
Tritium	Total Body	20,000
Strontium	Bone Marrow	8

22.92 Sampling-Monitoring Frequency:

22.921 Monitoring Frequency: Compliance with Section 22.911 shall be based on the analyses of an annual composite of four (4) consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals. At the discretion of the Division, when an annual record taken in accordance with Section 22.911 has established that the average annual concentration is less than one (1) half of the PMCL under 22.911, analyses of a single sample may be substituted for the quarterly sampling procedure specified herein. A gross alpha particle activity measurement may be substituted for the required radium 226 and 228 analysis provided that the measured gross alpha particle activity does not exceed five (5) pCi/liter. If this limit is exceeded, the same or an equivalent sample shall be analyzed for radium 226. If the concentration of radium 226 exceeds three (3) pCi/L, the same or an equivalent sample shall be analyzed for radium 228. The water supply shall be monitored at least once every four (4) years. More frequent monitoring may be required by the Division if it is deemed necessary. A CWS using two (2) or more sources, having different concentrations or radioactivity, shall monitor source water, in addition to water from a free flowing tap, when ordered by the Division. If the average annual PMCL for gross alpha particle activity or total radium as set forth in Section 22.911 is exceeded, the supplier shall give notice to the Division pursuant to Section 22.40 and notify the public as required by Section 22.41. Monitoring at quarterly intervals shall be continued until the annual average concentration no longer exceeds the PMCL or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

22.922 Surface Water Systems Serving a Population Greater than 100,000: Surface water systems serving a population greater than 100,000 and such other CWSs are designated by the Division shall be monitored for compliance with Section 22.912 by analyses of four (4) consecutive quarterly samples or analyses of a composite of four (4) consecutive quarterly samples. Compliance with Section 22.912 may be assumed without further analysis if the average annual concentration of gross beta particle activity is less than fifty (50) pCi/liter and if the average annual concentrations of tritium and strontium-90 are less than those listed in the table shown above, provided that if both radionuclides are present, the sum of their annual dose equivalents to bone marrow shall not exceed four (4) millirem/year. If the gross beta particle activity exceeds fifty (50) pCi/liter, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated to determine compliance with Section 22.912. Supplies shall be monitored at least once every four (4) years and more often if deemed necessary by the Division.

22.923 Utilizing Water Contaminated By Effluents from Nuclear Facilities: Any CWS designated by the Division as utilizing waters contaminated by effluents from nuclear facilities shall initiate quarterly monitoring for gross beta particles and iodine-131 radioactivity and annual monitoring for strontium-90 and tritium. Quarterly monitoring for gross beta particle activity shall be based on the analyses of monthly samples. If the gross beta particle activity in a sample exceeds fifteen (15) pCi/liter, the same or an equivalent sample shall be analyzed for Sr-89 and Cs-134. If the gross beta particle activity exceeds fifty (50) pCi/liter, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ or total body doses shall be calculated to determine compliance with Section 22.912. For I-131, a composite of five (5) consecutive daily samples shall be analyzed for each quarter. As ordered by the Division, more frequent monitoring shall be conducted when iodine-131 is identified in the finished water. Annual monitoring for strontium-90 and tritium shall be conducted by means of analyses of a composite of four (4) consecutive quarterly samples. If the average annual PMCL for man-made radioactivity set forth in Section 22.912 is exceeded, the operator of the CWS shall give notice to the Division pursuant to Section 22.40 and to the public as required by Section 22.41. Monitoring at monthly intervals shall be continued until the concentration no longer exceeds the PMCL or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

22.924 Analytical Methodology:

A. The methods specified in Interim Radiochemical Methodology for Drinking Water, Environmental Monitoring and Support Laboratory, EPA-600/4-75-008, U.S. EPA, Cincinnati, Ohio 45268, or those listed below are to be used to determine compliance with Section 22.911 and 22.912:

1. Gross Alpha and Beta - Method 302 "Gross Alpha and Beta Radioactivity in Water," Standard Methods for the Examination of Water and Wastewater, 13th Edition, American Public Health Association, New York, NY, 1971.

2. Total Radium - Method 304 " Radium in Water by Precipitation" Ibid.

3. Radium-226 - Method 305 "Radium-226 by Radon in Water," Ibid.

4. Strontium-89, 90 - Method 303 "Total Strontium and Strontium-90 in Water," Ibid.

5. Tritium - Method 306 "Tritium in Water," Ibid.

6. Cesium-134 - ASTM D-2459 "Gamma Spectrometry in Water," 1975 Annual Book of ASTM Standards, Water and Atmospheric Analysis, Part 31, American Society for Testing and Materials, Philadelphia, PA, 1975.

7. Uranium - ASTM D-2907 "Microquantities of Uranium in Water by Fluorometry," Ibid.

B. When the identification and measurement of radionuclides other than those listed in paragraph A are required, the following references are to be used:

1. Procedures for Radiochemical Analysis of Nuclear Reactor Aqueous Solution, H.L. Krieger and S. Gold, EPA-R4-73-074. U.S. EPA, Cincinnati, Ohio, May 1973.

2. HASL Procedure Manual, Edited by John H. Harley. HASL 300 ERDA health and Safety Laboratory, New York, NY, 1973.

C. For the purpose of monitoring radioactivity concentrations in drinking water, the required sensitivity of the radioanalyses is defined in terms of a detection limit. The detection limit shall be that concentration which can be counted with a precision of plus or minus one hundred (100) percent at the ninety-five (95) percent confidence level (1.96 - where - is the standard deviation of the net counting rate of the sample).

1. To determine compliance with Section 22.911A, the detection limit shall not exceed one (1) pCi/L. To determine compliance with Section 22.911B, the detection limit shall not exceed three (3) pCi/L.

2. To determine compliance with Section 22.912, the detection limits shall not exceed the concentrations listed in the Table below.

Detection Limits for Man-Made Beta Particle and Photon Emitters:

Radionuclide	Detection Limit
Tritium	1,000 pCi/L
Strontium-89	10p Ci/L
Strontium-90	2 pCi/L
Iodine-131	1 pCi/L
Cesium-134	10 pCi/L
Gross Beta	4 pCi/L
Other radionuclides	1/10 of the applicable limit

D. To judge compliance with the PMCLs listed in Sections 22.911 and 22.912, the averages of data shall be used and shall be rounded to the same number of significant figures as the PMCL for the substance in question.

E. Any other alternate analytical technique approved by the Division may also be used.

SECTION 22.10 SURFACE WATER TREATMENT RULE

22.1001 Untreated Water: The use of untreated (without filtration and disinfection) surface water or untreated ground water under the direct influence of surface water shall be prohibited.

22.1002 General Requirements: Each public water system with a surface water source or a ground water source under the direct influence of surface water must be operated by qualified personnel who meet the requirements of the Division and must provide treatment of that source water that complies with these treatment technique requirements. The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

A. At least 99.9 percent (3-log) removal and/or inactivation of *Giardia lamblia* cysts between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer; and

B. At least 99.99 percent (4-log) removal and/or inactivation of viruses between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer.

22.1003 Disinfection: Each public water system with a surface water source or a ground water source under the direct influence of surface water must provide treatment consisting of both filtration as specified in Section 22.1004 and disinfection as follows:

A. The disinfection treatment must be sufficient to ensure that the total treatment processes of that system

achieve at least 99.9 percent (3-log) inactivation and/or removal of Giardia lamblia cysts and at least 99.99 percent (4-log) inactivation and/or removal of viruses, as determined by the Division.

B. The residual disinfectant concentration in the water entering the distribution system, measured as specified in Section 22.1005 cannot be less than 0.3 mg/L for more than four (4) hours.

C. The residual disinfectant concentration in the distribution system, measured as total chlorine, combined chlorine, or chlorine dioxide, as specified in Section 22.1005 cannot be undetectable in more than five (5) percent of the samples each month, for any two (2) consecutive months that the system serves water to the public. Water in the distribution system with a heterotrophic bacteria concentration less than or equal to five hundred (500) per milliliter, measured as heterotrophic plate count (HPC) as specified in Section 22.1006, is deemed to have a detectable disinfectant residual for purposes of determining compliance with this requirement. Thus, the value V in the following formula cannot exceed five (5) percent in one (1) month, for any two (2) consecutive months.

$$V = \frac{c + d + e}{a + b} \times 100$$

where: a = number of instances where the residual disinfectant concentration is measured;

b = number of instances where the residual disinfectant concentration is not measured but HPC is measured;

c = number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured;

d = number of instances where no residual disinfectant concentration is detected and where the HPC is >500/ml; and

e = number of instances where the residual disinfectant concentration is not measured and HPC is >500/ml.

If the Division determines, based on site specific considerations, that a system has no means for having a sample transported and analyzed for HPC by an approved laboratory under the requisite time and temperature conditions specified in Section 22.1006, and that the system is providing adequate disinfection in the distribution system, the requirements of this Subsection do not apply.

22.1004 Filtration: Each public water system with a surface water source or a ground water source under the direct influence of surface water must provide treatment consisting of both disinfection as specified in Section 22.1003 and filtration that complies with any one (1) of the following by June 29, 1993:

A. Conventional Filtration or Direct Filtration - For systems using conventional filtration or direct filtration, the turbidity level of representative samples of a system's filtered must be less than or equal to 0.5 NTU in at least ninety-five (95) percent of the measurements taken each month, measured as specified in Section 22.1006, except that if the Division determines that the system is capable of achieving at least 99.9 percent removal and/or inactivation of Giardia lamblia cysts at some turbidity level higher than 0.5 NTU in at least ninety-five (95) percent of the measurements taken each month, the Division may substitute this higher turbidity limit for that system. However, in no case may the Division approve a turbidity limit that allows more than one (1) NTU in more than five (5) percent of the samples taken each month, measured as specified in Section 22.1006. The turbidity level of representative samples of a system's filtered water must at no time exceed five (5) NTU, measured as specified in Section 22.1006.

B. Slow Sand Filtration - For systems using slow sand filtration, the turbidity level of representative samples of a system's filtered water must be less than or equal to one (1) NTU in at least ninety-five (95) percent of the measurements taken each month, measured as specified in Section 22.1006, except that if the Division determines there is no significant interference with disinfection at a higher turbidity level, the Division may substitute the higher turbidity limit for that system.

C. Diatomaceous Earth Filtration - For systems using diatomaceous earth filtration, the turbidity level of representative samples of a system's filtered water must be less than or equal to one (1) NTU in at least ninety-five (95) percent of the measurements taken each month, measured as specified in Section 22.1006. The turbidity level of representative samples of a system's filtered water must at no time exceed five (5) NTU, measured as specified in Section 22.1006.

D. Other Filtration Technologies - A public water system may use a filtration technology not listed in this Section if it demonstrates to the Division, using pilot plant studies or other means, that the alternative filtration technology, in combination with disinfection treatment that meets the requirements of Section 22.1003, consistently achieves 99.9 percent removal and/or inactivation of Giardia lamblia cysts and 99.99 percent removal and/or inactivation of viruses. For a system that makes this demonstration, the requirements of paragraph B of this Section apply.

22.1005 Monitoring Requirements: - A public water system that uses a surface water source or a ground water source under the direct influence of surface water must monitor in accordance with the following by June 29, 1993:

A. Turbidity measurements as required by Section 22.1004 must be performed on representative samples of the system's filtered water at least every four (4) hours that the system serves water to the public. A public water system may substitute continuous turbidity monitoring for grab

sample monitoring if it validates the continuous measurement for accuracy on a regular basis using a protocol approved by the Division. For any systems using slow sand filtration or filtration treatment other than conventional treatment, direct filtration or diatomaceous earth filtration, the Division may reduce the sampling frequency to once per day if it determines that less frequent monitoring is sufficient to indicate effective filtration performance. For systems serving five hundred (500) or fewer persons, the Division may reduce the turbidity sampling frequency to once per day, regardless of the type of filtration treatment used, if the Division determines that less frequent monitoring is sufficient to indicate effective filtration performance.

B. The residual disinfectant concentration of the water entering the distribution system must be monitored continuously, and the lowest value must be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every four (4) hours may be conducted in lieu of continuous monitoring, but for no more than five (5) working days following the failure of the equipment, and systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequencies each day prescribed below:

System Population	Samples/Day*
<500	1
501-1,000	2

System Population	Samples/Day*
1,001-2,500	3
2,501-3,300	4

*The day's samples cannot be taken at the same time. The sampling intervals are subject to Division review and approval.

If at any time the residual disinfectant concentration falls below 0.3 mg/L in a system using grab sampling in lieu of continuous monitoring, the system must take a grab sample every four (4) hours until the residual disinfectant concentration is equal to or greater than 0.3 mg/L.

C. The residual disinfectant concentration must be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled, as specified in Section 22.5, except that the Division may allow a public water system which uses both a surface water source or a ground water source under the direct influence of surface water, and a ground water source to take disinfectant residual samples at points other than the total coliform sampling points if the Division determines that such points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as HPC as specified in Section 22.1006, may be measured in lieu of residual disinfectant concentration. If the Division determines, based on site specific considerations, that a system has no means for having a sample transported and analyzed for HPC by an approved laboratory under the requisite time and temperature conditions specified in Section 22.1006 and that the system is providing adequate disinfection in the distribution system, the requirements of this Subsection do not apply.

22.1006 Analytical Methodology - Only the analytical method(s) specified in this Section, or otherwise approved by EPA, may be used to demonstrate compliance with Sections 22.1002, 22.1003 and 22.1004. Measurement for pH, temperature, turbidity and residual disinfectant concentration must be conducted by a party approved by the Division. Measurements for total coliforms, fecal coliforms and HPC must be conducted by an approved laboratory. Until laboratory approval criteria are developed for the analysis of HPC and fecal coliforms, any laboratory approved for total coliform analysis is deemed approved for HPC and fecal coliform analysis. The following procedures shall be performed in accordance with the publications listed in the following Section. This incorporation by reference was approved by the Director of the Federal register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the methods published in Standard Methods published in Standard Methods for the Examination of Water and Wastewater may be obtained from the American Public Health Association et al. 1015 Fifteenth Street, NW., Washington, D.C. 20005; copies of the Minimal Medium ONPG-MUG Method as set forth in the article "National Field Evaluation of a Defined Substrate Method for the Simultaneous Enumeration of Total Coliforms and Escherichia coli from Drinking Water: Comparison with the Standard Multiple Tube Fermentation Method" (Edberg et al), Applied and Environmental Microbiology, Volume 54, pp.1595-1601, June 1988 (as amended under Erratum, Applied and Environmental Microbiology, Volume 54, p. 3197, December 1988), may be obtained from the American Water Works Association Research Foundation, 6666 West Quincy Ave., Denver, Colorado 80235; and copies of the Indigo Method as set forth in the article "Determination of Ozone in Water by the Indigo Method" (Bader and Hoigne), may be obtained from Ozone Science and Engineering, Pergammon Press Ltd., Fairview Park, Elmsford, New York 10523. Copies may be inspected at the U.S.E.P.A., Room EB15, 401 M Street SW., Washington, D.C. 20460 or at the Office of the Federal register, 1100 L Street, NW., Room 8401, Washington, D.C.

A. Total Coliform Concentration - See Section 22.52.

B. Fecal Coliform Concentration - See Section 22.52.

C. Heterotrophic Plate Count - Method 907A (Pour Plate Method), ,pp. 864-866, as set forth in Standard

Methods for the Examination of water and Wastewater, 1986, American Public Health Association et al., 16th edition.

D. Turbidity - See Section 22.702A

E. Residual Disinfectant Concentration - Residual disinfectant concentrations for free chlorine and combined chlorine (chloramines) must be measured by Method 408C (Amperometric Titration Method), pp. 303-306, Method 408D (DPD Ferrous Titrametric Method), pp. 306-309, Method 408E (DPD Colorimetric Method), pp. 309-310, or Method 408F (Leuco Crystal Violet Method), pp. 310-313, as set forth in Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., 16th edition. Residual disinfectant concentrations for free chlorine and combined chlorine may also be measured by using DPD colorimetric test kits if approved by the Division. Residual disinfectant concentration for ozone must be measured by the Indigo Method as set forth in Bader, H., Hoigne, J., "Determination of Ozone in Water by the Indigo Method; A submitted Standard Method"; Ozone Science and Engineering, Vol. 4 pp. 169-176, Pergammon Press Ltd., 1982, or automated methods which are calibrated in reference to the results obtained by the Indigo Method on a regular basis, if approved by the Division (NOTE - This method will be published in the 17th edition of Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., the Iodometric Method in the 16th edition may not be used). Residual disinfectant concentrations for chlorine dioxide must be measured by Method 410B (Amperometric Method) or Method 410C (DPD Method), pp. 322-324, as set forth in Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., 16th edition.

F. Temperature - Method 212 (Temperature), pp. 126-127, as set forth in Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., 16th edition.

G. pH - Method 423 (pH Value), pp. 429-437, as set forth in Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al., 16th edition.

1. "Methods of Chemical analysis of Water and Wastes," EPA Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268 (EPA-600/4-79-020), March 1985. Available fromORD Publications, CERI, EPA, Cincinnati, Ohio 45268

2. Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19013.

3. "Standard Methods for the Examination of Water and Wastewater," 16th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1985.

4. "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," Techniques of Water-Resources Investigations of the United States Geological Survey Books, Chapter A1, 1985, Open-File Report 85-495. Available from Open-File Services Section, Wester Distribution Branch, U.S. Geological Survey, MS 306 Box 24525, Denver Federal Center, Denver, Colorado 80225.

5. "Fluoride in Water and Wastewater. Industrial Method #129-71 W." Technicon Industrial Systems. Tarrytown, New York 10591, December 1972.

6. "Fluoride in Water and Wastewater," Technicon Industrial Systems. Tarrytown, New York 10591, February 1976.

7. "Orion Guide to Water and Wastewater Analysis." Form WeEEG/5880, p. 5, 1985. Orion Research, Inc, Cambridge, Maryland.

8. "Inductively Coupled Plasma Atomic Emission Analysis of Drinking Water," Appendix to Method 200.7, September 1985. U.S.E.P.A. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

9. The addition of 1 mL of 30% of H202 to each 100 mL of standards and samples is required before analysis.

10. Prior to dilution of the Arsenic and Selenium calibration standards, add 2 mL of 30% H202 for each 100 mL of standard.

11. For approved analytical procedures for metals, the technique applicable to total metals must be used.

DIVISION OF SOCIAL SERVICES

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

IN THE MATTER OF: |
|
REVISION OF THE REGULATIONS |
OF THE MEDICAID/MEDICAL |
ASSISTANCE PROGRAM |

NATURE OF THE PROCEEDINGS:

The Delaware Department of Health and Social Services ("Department") initiated proceedings to update policies related to practitioner and general policies. 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 June 1999 Delaware Register of Regulations, requiring written materials and suggestions from the public concerning the proposed regulations to be produced by June 30, 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 June 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 August 10, 1999.

July 9, 1999
Gregg C. Sylvester, M.D.
Secretary

***Please note that no changes were made to the regulation as originally proposed and published in the June 1999 issue of the Register at page 2228 (2:12 Del.R. 2228). Therefore, the final regulation is not being republished. Please refer to the June 1999 issue of the Register or contact the Department of Health and Social Services.**

DIVISION OF SOCIAL SERVICES

Statutory Authority: 31 Delaware Code, Section 505 (31 **Del.C.** 505)

IN THE MATTER OF: |
|
REVISION OF THE REGULATIONS |
OF THE MEDICAID/MEDICAL |
ASSISTANCE PROGRAM |

NATURE OF THE PROCEEDINGS:

The Delaware Department of Health and Social Services ("Department") initiated proceedings to issue new policy for assisted living and to update existing policies related to private duty nursing, HCBS waiver for the elderly & disabled, and general policy. 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.

Written comments were received on the portion of the proposed rule related to Assisted Living Provider policies, were considered and addressed in the revised rule below.

FINDINGS OF FACT:

The Department finds that the proposed changes as set forth in the May 1999 Register of Regulations should be adopted as amended for Assisted Living Provider Policy and as written for all other Delaware Medical Assistance Program Provider Policy Manuals published in the May 1999 Register..

THEREFORE, IT IS ORDERED, that the proposed regulations of the Medicaid/Medical Assistance Program are adopted and shall be final effective August 10, 1999.

7-9-99
Gregg C. Sylvester, M.D.
Secretary

REVISED RULE NOTE - This revision relates only to the Assisted Living Manual material published in the May 1999 Register. All other Delaware Medical Assistance Program (DMAP) Provider Policy manual material published in the May 1999 register is adopted as written.

This revision reflects a new numbering scheme for provider policy.

25.1 OVERVIEW

25.1.1 The Assisted Living Medicaid Waiver Program (ALMWP) is a community based residential services program administered by the Division of Services for Aging and Adults with Physical Disabilities (DSAAPD).

25.1.2 The program is funded by the Delaware Medical Assistance Program (DMAP) and state general funds and is targeted to older persons and adults with physical disabilities who meet Medicaid nursing home admission criteria.

25.1.3 Assisted living is:

25.1.3.1 The provision of housing and meals within a "homelike" environment (Medicaid does not reimburse the assisted living facility for room and board. The consumer is responsible for these charges).

25.1.3.2. Services and supports to meet an individual's needs, as identified by a standardized assessment tool and identified in the negotiated service agreement; and

25.1.3.3 A philosophy of care which emphasizes

consumer independence, choice, privacy and dignity.

25.1.4 Providers who render assisted living services to eligible consumers must be licensed as an assisted living agency by the Division of Long Term Care Residents Protection.

25.1.4.1 All assisted living service providers must sign a contract with DSS/Medicaid.

25.1.4.2 Providers enrolled with Medicaid are assigned a unique provider number ending with "74" which will identify them as an ALMWP provider. They will also be assigned a specialty code "K1", defined as "assisted living agency".

25.1.5 All records maintained by the ALMWP provider shall at all times be open to inspection by the authorized representatives of the Division of Long-term Care Residents Protection (DLTCRP), Office of Health Facilities Licensing and Certification, DSAAPD, DMAP and Long Term Care Ombudsman.

25.1.6 To ensure a variety of residential alternatives, the ALMWP may include the following types of settings:

25.1.6.1 Small group homes;

25.1.6.2 Larger residential settings;

25.1.6.3 Designated sections of apartment buildings; and

25.1.6.4 Housing clusters (e.g., townhouses, mobile homes).

25.2 GENERAL INFORMATION

25.2.1 The ALMWP provider may bill the per diem rate for any day that the consumer is present in the assisted living agency for a ny part of the day.

25.2.2The ALMWP provider may not bill the per diem rate for any day that the consumer is absent from the assisted living agency for the entire day.

25.2.3 The DMAP does not cover home health services provided to an assisted living consumer on a non-medical/ social leave of absence outside of the State of Delaware.

25.2.4 The DMAP may cover medically necessary home health services to an assisted living consumer on a non-medical/social leave of absence within the State of Delaware. Prior authorization must be obtained through the DSAAPD nurse for nursing aide services and/or skilled nursing services.

25.2.5 The DMAP may cover medically necessary skilled nursing visits or private duty nursing visits in the assisted living agency. Prior authorization must be obtained through the DSAAPD nurse.

25.2.6 The DMAP does not cover home health aide visits in the assisted living agency. (Home health aide services provided in the assisted living agency are reimbursed as part of the ALMWP per diem rate.)

25.2.7 To prevent the possibility of payment for duplicate services, the DMAP will only cover the assisted living per diem OR the hospice per diem for consumers who elect hospice coverage.

25.2.8 Based upon a documented change in the consumer's condition, the ALMWP provider may request a review of the monthly service rate and/or the supplemental services payment by the DSAAPD nurse. Such a review may occur no more frequently than quarterly. See Supplemental Services Payment information in Section VII of this manual.

25.2.9 The ALMWP provider may request approval from DSAAPD to receive the supplemental services payment no more frequently than quarterly. See Supplemental Services Payment information in Section VII of this manual.

25.3 ELIGIBILITY CRITERIA

25.3.1 The ALMWP is particularly targeted to older adults and adults with physical disabilities who need assistance with the Activities of Daily Living (ADL). To be eligible for the ALMWP consumers must:

25.3.1.1 be residents of the State of Delaware;

25.3.1.2 be 18 years of age or older; and

25.3.1.3 meet the financial, medical, and program eligibility criteria specified below.

25.3.2 All applicants must be determined medically and financially eligible for the DMAP and meet Medicaid nursing home admission criteria.

25.3.3 Financial Eligibility

25.3.3.1 Financial eligibility is determined by the DSS Long Term Care Financial Unit.

25.3.3.2 Applicants for the ALMWP must meet the income and assets criteria for Long Term Care Medicaid.

25.3.3.3 Any individual who is in receipt of SSI, who would be eligible for SSI if she/he were not institutionalized, or whose income is less that 250% of the SSI standard and who has resources that are less than $2,000, and burial funds less than $1,500 MAY be financially eligible to have Medicaid payments made on his/her behalf to the ALMWP provider.

25.3.3.4 When the application for the ALMWP has been approved, the Medicaid Financial Unit will send a notice of acceptance to the applicant, family, and ALMWP provider.

25.3.3.5 The admitting ALMWP provider will receive a notice which indicates the:

25.3.3.5.1 Amount of the consumer's monthly income due to the ALMWP provider;

25.3.3.5.2 Amount to be retained for medical insurance and personal needs;

25.3.3.5.3 Effective date of the Medicaid coverage; and

25.3.3.5.4 Consumer's Medicaid ID number (to be used for billing).

25.3.3.6 Collection of the patient pay amount from the consumer or his/her representative is the responsibility of the ALMWP provider.

25.3.3.7 If the consumer has income under the Adult Foster Care standard, there will be no patient pay amount.

25.3.4 Medical Eligibility

25.3.4.1 Medical eligibility is determined by the Pre-Admission Screening Units of either DSS or DSAAPD.

25.3.5 Program Eligibility

25.3.5.1 Program eligibility for the ALMWP will be determined by the DSAAPD. An individual must:

25.3.5.1.1 Have need of an assisted living service on a regular weekly basis; and

25.3.5.1.2 Be able to be maintained safely in the assisted living agency with the provision of the ALMWP services. Safety concerns must be brought to resolution through a mutually agreed upon Managed Risk Agreement. ~~**[An individual whose needs can be appropriately met solely by the use of assistive technology and/or home modifications is not eligible for the ALMWP.]**~~

25.3.5.2 The ALMWP is not appropriate for clients needing only:

25.3.5.2.1 A Medicaid card.

25.3.5.2.2Housing.

25.3.5.3 An individual will not be able to enter the ALMWP unless:

25.3.5.3.1 There is a unit available in an assisted living agency that can meet the consumer's needs and preferences;

25.3.5.3.2 The total annual costs billed to Medicaid for assisted living and community care services are no more than the annual cost of Medicaid nursing facility care;

25.3.5.3.3 The consumer, alone or with the assistance of a representative, can make decisions that allow him/her to reside safely in the community within the provision of assisted living services;

25.3.5.3.4The maximum number of clients who can be served under the ALMWP has not been reached;

25.3.5.3.5 The client must participate in the eligibility determination process both with the ALMWP provider and DSAAPD. The negotiated Service Agreement and any Managed Risk Agreement must be reviewed and approved by DSAAPD.

25.3.5.4 As per 63.505 of the Delaware Regulation for Assisted Living Agencies:

25.3.5.4.1 The assisted living agency shall not admit any consumer who needs services which cannot be provided or arranged for by the assisted living agency. The ALMWP provider shall not provide services to a consumer who:

25.3.5.4.1.1 Needs 24 hours nursing services or whose medical conditions are unstable to the point that they require frequent observation, assessment and intervention by a licensed professional nurse, including unscheduled nursing services. Unless the attending physician certifies that despite the presence of this factor, the consumer's need may be safely met by a Service Agreement developed by the ALMWP provider, the attending physician, a registered nurse, the consumer or his/her representative and other appropriate health care professionals as determined by the consumer's needs;

25.3.5.4.1.2 Is bedridden for 14 consecutive days unless a physician certifies that despite the presence of this factor, the consumer's needs may be safely met by a Services Agreement developed by the ALMWP provider, the attending physician, a registered nurse, the consumer or his/her representative and other appropriate health care professional as determined by the consumer's needs;

25.3.5.4.1.3 Needs transfer assistance by more than one person and a mechanical device unless special staffing arrangements have been made to ensure safe care and evacuation;

25.3.5.4.1.4 Has conditions that exceed program capabilities; or

25.3.5.4.1.5 Presents a danger to self or others or engages in illegal drug use.

25.3.6 Approval of the Service Agreement

25.3.6.1 The Service Agreement and any Managed Risk Agreements, negotiated between the ALMWP provider and the consumer, must be completed and received by DSAAPD, at least 10 days prior to the client's entrance into the assisted living agency.

25.3.6.2 The terms of the Service Agreement and any Managed Risk Agreements, must be approved by both the DSAAPD AL/CM and the DSAAPD Nurse.

25.3.6.2.1 The purpose of the review is to ensure that the agreement reflects the consumer's care needs of both skilled and unskilled services.

25.3.6.2.2 The agreement should be reasonable in terms of services received for that designated monthly service rate.

25.3.6.3 The AL/CM and Nurse will signify their approval of the Service Agreement and any Managed Risk Agreements by their signatures on the Service Agreement Approval Form (Appendix B) and the Advanced Action Notice for the client.

25.3.6.4 DSAAPD will signal the provider of their approval by sending the provider:

25.3.6.4.1 The Service Agreement Approval Form.

25.3.6.4.2 The consumer's Care Plan.

25.3.6.4.3 The Advanced Action Notice for the consumer.

25.4 CONTENT/DESCRIPTION OF ASSISTED LIVING SERVICES

25.4.1 Assisted living services include the following:

25.4.1.1 Personal Services/Assistance with the

Activities of Daily Living (ADLs)

25.4.1.2 Nursing Services

25.4.1.3 Meal Services

25.4.1.4 Social/Emotional Services

25.4.1.5 Assistance with Instrumental Activities of Daily Living (IADLs)

25.4.2 Personal Services/Assistance with the Activities of Daily Living
(ADLs)

25.4.2.1 Personal services/assistance with the ADLs encompass a range of interventions (supervision, minimum assistance, moderate assistance and maximum [total] assistance) to aid the consumer in the performance of one or more of the activities of daily living (e.g., ambulating, transferring, grooming, bathing, dressing, eating and toileting).

25.4.2.1.1 Ambulating includes: supervision (e.g., staff person accompanies consumer with balance problems when walking, etc.); minimum, moderate or maximum assistance for consumers who need human help and/or use a cane, walker, crutches, or a wheelchair; assistance with climbing stairs; assistance with turning/positioning in bed or chair.

25.4.2.1.2 Transferring includes: supervision of self-transfer; minimum, moderate or maximum assistance for consumers when moving from bed to chair (e.g., using transfer board, one person or one person plus mechanical lift, unless special staffing arrangements have been made, as specified in Regulation 63.505 of the Delaware Regulations for Assisted Living Agencies).

25.4.2.1.3 Grooming includes: reminders; supervision of self-care; minimum, moderate or maximum assistance with specific tasks (e.g., shaving, shampooing, oral care, finger nails, toe nails); applying or changing non-sterile dressings.

25.4.2.1.4 Bathing includes: reminders; supervision or preparation of bath when consumer bathes self; scheduling/encouragement/other appropriate interventions when consumer resists bathing regularly; minimum, moderate or maximum assistance with bathing (e.g., human or mechanical assistance to get in the tub or shower; assistance with bathing self; total bathing assistance).

25.4.2.1.5 Dressing includes: reminders; supervision of consumers who dress themselves; minimum, moderate or maximum assistance with dressing (e.g., helping consumer pick out clothes; getting clothes from closet or dresser; assisting with fasteners, zippers, shoes; putting on or taking off braces/prosthetics, etc.).

25.4.2.1.6 Eating includes: reminders; assistance with self-feeding (e.g., arranging food tray, opening containers, cutting food, etc.); supervision during meal time (e.g., for consumers who have difficulty swallowing, who need to be encouraged to eat, etc.); minimum, moderate or maximum assistance for residents who need to be fed. Assistance with tube feeding is not included. It is expected that an individual requiring tube feeding would be independently responsible for this skill.

25.4.2.1.7 Toileting includes: reminders; bowel and/or bladder training programs; supervision when using the toilet; minimum, moderate and maximum assistance (e.g., taking the consumer to the bathroom, helping the consumer use a bedpan or urinal, etc.); routine catheter care (e.g., reminders or supervision of consumers doing self-care, performing routine care); routine ostomy/colostomy care (e.g., reminders or supervision of consumers doing self-care, performing routine care).

25.4.3 Nursing services to be provided by a registered nurse [RN] or a licensed practical nurse [LPN] available in assisted living include the following:

25.4.3.1 Routine nursing services expected to be provided directly by the assisted living agency includes assistance with medication administration,* insulin/other injections, blood sugar monitoring; and nursing assessment. *Under an amendment of the Delaware Nurse Practice Act, assistance with self-administration of medications, other than by injection, may be provided by caregivers who have successfully completed a State Board of Nursing approved medication training program [24 Delaware Code, Chapter 19, Subsection 1921(a)(16)].

25.4.3.2 Non routine nursing and therapy services may be brought into the assisted living setting with the approval of DSAAPD. These nursing and therapy services include; non-routine skilled nursing when needed on a short term or intermittent basis, or occupational, speech or physical therapy.

Such nursing and therapy services are beyond the scope of nursing services covered by the ALMWP, and may be paid for by Medicare, Medicaid, private insurance, or personal funds, as appropriate.

25.4.4 Meal Services

25.4.4.1 Assisted living providers are required to serve three meals per day (food costs are covered in the room and board payment).

25.4.4.2 Consumer's food preferences must be considered in developing menus, and food substitutions should be available at all meals.

25.4.4.3 When a consumer needs a special diet ordered for therapeutic reasons by a physician, the assisted living provider must consult with a dietitian and/or nurse in developing special menus/appropriate substitutions to meet the consumer's needs and food preferences.

25.4.5Social/Emotional Services

25.4.5.1 Assisted living providers that serve persons with dementia or other cognitive impairments must have the capacity to provide needed staff support, intervention and supervision to such individuals.

25.4.5.2 The regulations require assisted living providers to develop policies and procedures designed to

prevent cognitively impaired consumers from wandering away from safe areas (Delaware Regulations for Assisted Living Agencies, Section 63.304).

25.4.6 Assistance With Instrumental Activities of Daily Living (IADLs)

25.4.6.1 Assistance with IADLs encompasses a range of interventions (supervision, minimum assistance, moderate assistance and maximum [total] assistance) to assist the consumer in performing one or more of the IADLs. IADLs include the following specific services:

25.4.6.1.1 Laundry;

25.4.6.1.2 Meal preparation (consumers who wish to prepare some or all of their meals or snacks should receive needed assistance with food shopping, meal preparation and cleaning up after the meal);

25.4.6.1.3 Cleaning the consumer's living unit;

25.4.6.1.4 Shopping assistance;

25.4.6.1.5 Making arrangements for routine or special health needs (e.g., scheduling medical appointments, reminding consumers of scheduled appointments, providing transportation to appointments);

25.4.6.1.6 Money management (as specified in the service agreement and approved by DSAAPD). The assisted living provider or any of its employees may not serve as Representative Payee or in any legal capacity such as a guardian.

25.5 PROGRAM RESPONSIBILITY

25.5.1 DSAAPD Responsibility

25.5.1.1 It is the responsibility of the DSAAPD to oversee the day-to-day operation of the ALMWP. The Division will be responsible for the following functions:

25.5.1.1.1 Recruit and monitor assisted living providers;

25.5.1.1.2 Furnish the assisted living provider with administrative and program guidance;

25.5.1.1.3 Determine program (medical and technical) eligibility of all consumers who apply for admission to the program, upon admission to the program, and re-determine annually thereafter;

25.5.1.1.4 Determine consumer's monthly service rate;

25.5.1.1.5 Forward, upon the consumer's written request, the consumer's most recent assessment, level of care and anticipated monthly service rate to prospective ALMWP providers;

25.5.1.1.6 Facilitate consumer placement in the ALMWP;

25.5.1.1.7 Participate (as appropriate) with the consumer and the provider in negotiating the Service Agreement. At the minimum, the Service Agreement must address the need for the following:

25.5.1.1.7.1 Personal services;

25.5.1.1.7.2 Nursing services;

25.5.1.1.7.3 Food services;

25.5.1.1.7.4 Environmental services including housekeeping, laundry, safety, trash removal;

25.5.1.1.7.5 Social/emotional services including those related to cognitive deficits;

25.5.1.1.7.6 Financial management services;

25.5.1.1.7.7 Transportation services;

25.5.1.1.7.8 Individual living unit furnishings;

25.5.1.1.7.9 Notification of family when there is a change in the health status of the consumer;

25.5.1.1.7.10 Assistive technology and durable medical equipment;

25.5.1.1.7.11 Rehabilitation services;

25.5.1.1.7.12 Qualified interpreters for people who are deaf and hard of hearing; and

25.5.1.1.7.13 Reasonable accommodations for persons with disabilities.

25.5.1.2 The Service Agreement is based on the service assessment and is developed jointly by the consumer or representative, the provider and DSAAPD through negotiation. No one person unilaterally decides the content of the Service Agreement. The Service Agreement must be completed no more than 30 days prior to move-in, and must be reviewed, and, if needed, revised within 14 days of admission and at least annually by all parties named above.

25.5.1.2.1 Participate (as appropriate) with the consumer and the provider in negotiating the Managed Risk Agreement. The Managed Risk Agreement is a written addendum to the Service Agreement which specifies how a situation, in which the consumer's choice or preference places the consumer at risk or is likely to lead to adverse consequences, will be handled. A Managed Risk Agreement may be negotiated in conjunction with the Service Agreement, or at any time a situation arises which is appropriate to be addressed by a Managed Risk Agreement. If a Managed Risk Agreement is made a part of the Service Agreement, it shall:

25.5.1.2.1.1 Clearly describe the problem, issue or service that is the subject of the Managed Risk Agreement.

25.5.1.2.1.2 Describe the choices available to the consumer as well as the risks and benefits associated with each choice, the ALMWP provider's recommendations or desired outcome, and the consumer's or his/her representative's desired preference.

25.5.1.2.1.3 Indicate the agreed upon option.

25.5.1.2.1.4 Describe the agreed upon responsibilities of the ALMWP provider, the consumer and any third party providers.

25.5.1.2.1.5 Become a part of the Service

Agreement, and be signed separately by the consumer, or his/her representative, the ALMWP provider, and any third party with obligations under the Managed Risk Agreement that the third party is able to fully comprehend and perform.

25.5.1.2.1.6 Include a time frame for review.

25.5.1.2.2 Review and approve the negotiated Service Agreement.

25.5.1.2.3 Review and approve any Managed Risk Agreement.

25.5.1.2.4 Prior authorize nursing aide and/or skilled nursing services or private duty nursing as described in General Information.

25.5.1.2.5 If the consumer is eligible to receive a supplemental payment for services related to cognitive impairment, ensure that a family member or representative is present in Service Agreement negotiation.

25.5.1.2.6 Ensure that the director and staff of the ALMWP provider meet the minimum provider standards as described in this policy.

25.5.2 DSS/Medicaid Responsibility

25.5.2.1 It is the responsibility of DSS/Medicaid to:

25.5.2.1.1 Determine consumer's financial eligibility.

25.5.2.1.2 Notify DSAAPD of any changes in financial eligibility.

25.5.2.1.3 Furnish the ALMWP provider with Medicaid program guidance.

25.5.2.1.4 Issue Medicaid policies, rules, and regulations related to the ALMWP.

25.5.2.1.5 Complete appropriate file maintenance forms to keep payment rates updated in the MMIS system.

25.5.2.1.6 Enroll assisted living providers.

25.5.2.1.7 Process claims and reimburse providers who are enrolled with the DMAP to provide assisted living services.

25.5.3 Provider Responsibility

25.5.3.1 Administrative

25.5.3.1.1 The provider must:

25.5.3.1.1.1 Meet and comply with all federal, state and local rules, regulations and standards that are applicable to assisted living. All ALMWP providers must be licensed and regulated by the **~~[DPH]~~ [DLTCRP]**, in compliance with the Delaware Regulations for Assisted Living Agencies, adopted under Title 16, Part II, Chapter 11 of the Code of Delaware.

25.5.3.1.1.2 Be monitored at least annually, or more frequently, if determined necessary by DSAAPD.

25.5.3.1.1.3 Accept applicants approved by the ALMWP for placement unless the agency provides documented evidence that it does not have the capacity to serve the needs of the applicant.

25.5.3.1.1.4 Accommodate the changing needs of consumers in the ALMWP and is expected to have the capacity to provide more assistance than the consumer needs on admission, unless the agency provides evidence that it does not have and is unable to develop such capacity, without changing the nature of the agency.

25.5.3.1.1.5 Give clear information to the DSAAPD and to all prospective applicants for admission, regarding its limitation in providing services to meet consumer's changing needs, and criteria and procedures for discharge.

25.5.3.1.1.6 Accept the room and board rate and the monthly service rate set by DSAAPD as payment in full for each consumer the ALMWP provider admits.

25.5.3.1.1.7 Collect the consumer's patient pay amount.

25.5.3.1.1.8 Notify DSAAPD and DSS regarding all consumer insurance coverage.

25.5.3.1.1.9 Ensure that all residents and paid and volunteer staff of the assisted living agency are knowledgeable about residents' rights as specified in Delaware Regulations for Assisted Living Agencies and the "Rights of Patients," Code of Delaware, Title 16, Chapter 11, Subchapter II.

25.5.3.1.1.10 Ensure that consumers do not waive rights guaranteed in the Delaware Regulations for Assisted Living Agencies and the "Rights of Patients," Code of Delaware, Title 16, Chapter 11, Subchapter II. Upon admission, all consumers must be given, in writing, the name, address and telephone number of the following:

25.5.3.1.1.10.1 The contact person for the ALMWP at DSAAPD;

25.5.3.1.1.10.2 The Long Term Care Ombudsman; and

25.5.3.1.1.10.3 The **~~[DPH]~~ [DLTCRP]** licensing director.

25.5.3.1.1.11 Ensure the right of consumers to make informed choices about all aspects of their lives, and must ensure the full participation in decision-making of the consumer's representative.

25.5.3.1.1.12 Maintain the confidentiality of the consumer's records and the discussions, which take place during the negotiation of the Service Agreement. The ALMWP provider also must recognize the right of the consumer to read or get a copy of his/her records and to give consent in writing for others to review or receive a copy of such records.**[Ensure access at any reasonable hour by representatives of DSAAPD, DPH, and DSS to individual consumers with their verbal consent and to the facility.]**

25.5.3.1.1.13 Ensure access to authorized representatives of the Department of Health and Social Services to the consumer's personal and medical records.

25.5.3.1.1.14 Ensure access to authorized

representatives of the Department of Health and Social Services to the facility at any reasonable hour.

25.5.3.1.1.15 Conduct service assessments. The initial service assessment must be conducted no more than 30 days prior to admission. It should be reviewed and revised, if appropriate within 14 days of admission and as frequently as needed thereafter, but no less than annually.

25.5.3.1.1.16 Ensure that consumers who have grievances or complaints receive a timely response and that, whenever possible, consumers' grievances and complaints are resolved to his/her satisfaction. A written record of all such grievances and complaints must be maintained by the ALMWP provider. Such records are open for review by representatives of DSAAPD, ~~**[DPH]**~~ DLTCRP and DSS.

25.5.3.1.1.16.1 When such grievances or complaints are not resolved by the provider to the consumer's satisfaction, the provider must facilitate the ability of consumers to contact any and all of the following:

25.5.3.1.1.16.1.1 Service Agreement concerns should be directed to DSAAPD.

25.5.3.1.1.16.1.2 Service delivery concerns should be directed to DSS, the Ombudsman, and the **[Division of]** Long Term Care Residents Protection.

25.5.3.1.1.16.1.3 ~~**[DPH]**~~ DLTCRP or any other agency, advocate or individual the consumer chooses to contact.

25.5.3.1.1.16.2 Retaliation against consumers, family members, staff or others who complain or report grievances is prohibited. Such actions will result in a referral to the Ombudsman for an investigation to determine if a violation has occurred which warrants further legal action, and may result in termination of the contract.

25.5.3.1.1.17 As per Section 63.802 of Delaware's Assisted Living Regulations, on at least a semi-annual basis, the assisted living agency shall survey each consumer or his/her representative regarding their satisfaction with services provided.

25.5.3.1.1.17.1 The assisted living agency shall retain all surveys which shall be reviewed during inspections.

25.5.3.1.1.17.2 The assisted living agency shall maintain documentation which addressed what actions were taken as a result of the surveys.

25.5.3.1.1.18 Not interfere with the right of consumers and/or families to form consumer and family groups, such as resident councils, and must make available, upon request, private meeting space for such groups.

25.5.3.1.1.19 Provide adequate notification (at least 30 days in advance) to DSAAPD of plans to discharge any consumer in the ALMWP and provide evidence that residents' rights regulations are followed and that the consumer and family and/or surrogate received timely notice; a discharge plan has been developed in conjunction with the consumer; and prior to issuance of a discharge notice, efforts were made to address identified problems.

25.5.3.1.1.20 Provide notice to the DSAAPD and DSS when changes, such as the following occur:

25.5.3.1.1.20.1 A change in ownership, including a change in the membership of boards of directors or other corporate governing bodies;

25.5.3.1.1.20.2 A change in the assisted living agency's director;

25.5.3.1.1.20.3 Any change in the form of legal organization of the assisted living agency.

25.5.3.1.1.20.4 At least 60 days advance notice for planned changes, and immediate notification when unforeseen changes occur, is required. Contracts with assisted living agencies may not be transferred; when a change in ownership or corporate structure occurs, DSS will determine if a new contract must be negotiated with the ALMWP provider.

25.5.4 Management

25.5.4.1 The provider must:

25.5.4.1.1 Adopt the ALMWP's Guiding Principles, and specify in policies and procedures how the principles will be implemented. The Guiding Principles adopted for Delaware's ALMWP specify that each ALMWP provider will:

25.5.4.1.1.1 Be rooted in the consumer driven values of home and community based services that seek to maximize individual decision making and independence.

25.5.4.1.1.2 Personalize the services provided according to each individual's preferences and capabilities.

25.5.4.1.1.3 Enable consumers to remain in their assisted living residence by providing flexible ~~**[support]**~~ services to accommodate varying needs and expectations that will evolve over time.

25.5.4.1.1.4 Maximize the ability of consumers to choose both the types of ~~**[supports]**~~ services the program will provide them and the level of responsibility they will assume in addressing their service needs.

25.5.4.1.1.5 Provide consumers with assisted living services in a wide range of settings that offer security, privacy and an affordable home-like environment.

25.5.4.1.1.6 Provide supportive and health services based on a social model of care rather than on an institutional model of medical care.

25.5.4.1.2 Ensure that the director of the assisted living agency meets the following minimum standards:

25.5.4.1.2.1 Education – A high school diploma or equivalent is required, plus at least 20 hours of

education or training in one or more of the following areas: assisted living administration; health care or nursing home administration; nursing; gerontology; social work; or other relevant human service or administrative discipline. Documentation must be provided to verify training and/or course work.

25.5.4.1.2.2 Experience – At least two years experience as a director of a residential facility, nursing facility or home health agency; or at least three years experience as a nurse, social worker, or senior manager in a residential setting, nursing facility, home health agency, or an agency providing ADL assistance to the aging and/or adults with disabilities.

25.5.4.1.2.3 Background check – The ALMWP provider must present evidence that prior to employment a background check was completed on the director. This will be evidenced by contacting the State Adult Abuse, Nurse Aide and Child Abuse Registries and obtaining or attempting to obtain service letters from current or most recent employer and from all health care and child care employers for the past five years. ALMWP providers may not employ as a director a person who has a finding or conviction of abuse, neglect, exploitation or misappropriation of funds.

25.5.4.1.2.4 Orientation and training for providers – All directors must complete an initial orientation and training program for ALMWP providers given by DSAAPD.

25.5.4.1.2.5 Ongoing education and training – All directors must complete at least 10 hours of training each calendar year in one or more of the following areas: any aspect of assisted living or long term care facility administration; gerontology; Alzheimer's Disease or other dementia care; disabilities; mental health.

25.5.4.1.3 The ALMWP provider must ensure that all staff of the assisted living agency meet the following minimum standards:

25.5.4.1.3.1 Education – A high school diploma or equivalent plus certification as a nurse aide or home health aide, or successful completion of other appropriate caregiver training. Documentation must be provided to verify training and/or course work.

25.5.4.1.3.2 Experience – At least one-year experience as a caregiver in a residential setting, nursing facility, home health agency or agency providing ADL assistance to the aging and/or adults with disabilities is preferred but not required as long as educational qualifications are met.

25.5.4.1.3.3 Background check – The provider must present evidence that prior to employment, a background check was completed on all staff by contacting the State Adult Abuse, Nurse Aide and Child Abuse Registries and obtaining or attempting to obtain reference letters from previous employer(s) of the last three years. ALMWP providers may not employ, as a caregiver, a person who has a finding or conviction of abuse, neglect, exploitation or misappropriation of funds.

25.5.4.1.3.4 Orientation and training for all staff – All staff must receive an initial orientation and training program for assisted living staff, which may be provided by the ALMWP provider.

25.5.4.1.3.5 Ongoing education and training – All staff who have direct consumer contact must complete at least 10 hours of training each calendar year in one or more of the following areas: care-giving skills focused on the aging and/or adults with physical disabilities; assisted living philosophy or care-giving skills; gerontology; Alzheimer's Disease or other dementia care; mental health.

25.5.4.1.3.6 Specialized training – Staff must receive specialized training to meet the needs of particular consumers, when such training is identified as necessary by DSAAPD.

25.5.4.1.4 Ensure that staff who provide nursing services are appropriately licensed.

25.5.4.1.5 Ensure that caregivers who provide assistance with self-administration of medications have successfully completed a State Board of Nursing approved medication training course and must demonstrate competence annually.

25.5.4.1.6 Employ sufficient numbers of staff to meet a range of consumer's service needs.

25.5.4.1.7 Ensure that drivers in their employ who provide transportation to consumers have an appropriate valid driver's license.

25.5.4.1.8 Have the capacity for automated billing.

25.5.4.1.9 Enter into an ALMWP contract and be willing to enter into a State Funded Assisted Living contract.

25.5.5 Services

25.5.5.1 The provider must:

25.5.5.1.1 Be responsible and accountable for providing the services delineated in the Service Agreement.

25.5.5.1.2 Have the capacity to meet the current and changing service needs of consumers they admit under the ALMWP, complying with the assisted living services definitions.

25.5.5.1.3 Ensure that assisted living services are of a high quality and that the manner in which services are delivered enhances, to the greatest extent possible, the consumer's ability to function independently and to exercise choice and control over his/her life.

25.5.5.1.4 Provide flexible services that accommodate and support the consumer's independence and ability to make decisions.

25.5.5.1.5 Support Managed Risk Agreements and recognize the consumer's right to take responsibility for the risks associated with exercising choice and

decision-making.

25.5.5.1.6. Participate jointly with the consumer, the consumer's representative and the DSAAPD representative, if requested by the consumer, in the development of the Service Agreement. The initial Service Agreement must be developed in a face-to-face meeting and must be scheduled at a time and place that is mutually agreeable to all parties. The provider must accommodate the consumer's individual needs. The initial agreement must be completed no more than 30 days before move-in.

25.5.5.1.7 Ensure that the Service Agreement and any Managed Risk Agreement, negotiated between the ALMWP provider and the consumer, is completed and received by DSAAPD at least 10 days prior to the consumer's admission into the assisted living agency.

25.5.5.1.8 Ensure that the health care needs of the consumer are addressed when he/she is on a non-medical/social leave of absence. This may necessitate a referral to a DSAAPD case manager.

25.6 OBTAINING PRIOR AUTHORIZATION

25.6.1 Prior authorization is required for all nursing aide, skilled nursing and private duty nursing services that are beyond the scope covered by the ALMWP (see General Information section of this manual). These services can only be provided by an agency or entity that is enrolled with the DMAP as a home health agency (with a provider number ending in "14") or a private duty nurse (with a provider number ending in "38"). ALMWP providers may not bill the DMAP for the above services using their ALMWP provider number ending in "74".

25.6.2 The primary care physician, family, consumer, home health agency, or private duty nurse should direct requests for prior authorization to the appropriate DSAAPD location as listed on the front of this manual.

25.6.3 The request should include the following information:

25.6.3.1 Name of consumer

25.6.3.2 Consumer's Medical Assistance ID number

25.6.3.3 Date of birth

25.6.3.4 Detailed medical history that documents the need for the home health or private duty nursing service requested

25.6.3.5 Nursing assessment and plan of care. Plan of care includes rehabilitation goals and objective designed to restore, improve, or maintain the consumer's optimal level of functioning, self-care, self-responsibility, independence, and quality of life. Assessment includes, but is not limited, to the following components:

25.6.3.5.1 Physical assessment and diagnosis

25.6.3.5.2 Psycho-social assessment including home, family and environmental factors

25.6.3.5.3 Level of function (physical, mental, developmental)

25.6.3.5.4 Availability and ability of caretaker to maintain client in the home, e.g., knowledge of emergency procedures

25.6.4 The DSAAPD will forward a letter detailing the prior authorization to the home health agency or private duty nurse. This notification must be retained in the home health agency or private duty nurse medical record.

25.7 SUPPLEMENTAL SERVICES PAYMENT

25.7.1 The following is quoted from the Assisted Living Provider Specifications (1998):

25.7.1.1 Supplemental Services Payment: consumers with dementia or other cognitive impairments who have the characteristics such as those listed below may need additional staff support, intervention and supervision from the assisted living agency. ALMWP providers that serve persons with dementia or other cognitive impairments must have the capacity to provide needed staff support, intervention and supervision to such individuals. ALMWP providers may request approval from DSAAPD to receive a supplemental payment for individual consumers, equivalent to 10% of the base payment.

25.7.2 A request for supplemental payment will be approved based on evidence that all of the conditions specified below are met.

25.7.2.1 Documentation is presented of the consumer's diagnosis of severe cognitive impairment with one or more of the characteristics specified below, as determined by a written assessment of the consumer's psychosocial and cognitive status in consultation with an appropriate medical and/or mental health professional. Characteristics include, but are not limited to, the following:

25.7.2.1.1 Severe memory loss

25.7.2.1.2 Disorientation/confusion

25.7.2.1.3 Impaired judgement which significantly affects ability to recognize the need for assistance

25.7.2.1.4 Inability to recognize danger

25.7.2.1.5 Inability to communicate needs by any means or to summon assistance

25.7.2.2 Documented evidence is provided to verify that a pattern of significant behavior problems exists, that is, significant behavior problems occur frequently and/or are unpredictable. Such behaviors must be shown to have a specific impact on the health, safety and/or independent functioning of the consumer and/or the health safety, independent functioning and/or rights of other consumers, with the result that supervision is needed all or most of the time. Behaviors that may rise to the level of significant behavior problems include, but are not limited to, the following:

25.7.2.2.1 Wandering

25.7.2.2.2 Self abusive behaviors

25.7.2.2.3 Verbal aggression, e.g., cursing, threatening to strike, hit, punch, bite

25.7.2.2.4 Agitation/disruptive behavior, e.g., screaming, banging, throwing objects

25.7.2.2.5 Combative behavior/physical aggression during care or in interactions with others

25.7.2.2.6 Verbal or physical sexual advances, public masturbation

25.7.2.3 A cognitive intervention plan is developed by the provider in consultation with an appropriate medical and/or mental health professional. The consumer and the consumer's family and/or surrogate decision-maker also must be involved in the development of the plan and must give written consent before it is finalized. The cognitive intervention plan must:

25.7.2.3.1 Be flexible

25.7.2.3.2 Emphasize practical remedies

25.7.2.3.3 Ensure consumer safety while maximizing the consumer's ability to make decisions and function independently

25.7.2.3.4 Include a program of meaningful structured activities, when appropriate

25.7.2.3.5 Include a plan for making environmental changes identified, as necessary

25.7.2.3.6 Provide consultation with and availability of support from appropriate dementia, disability and/or mental health specialists

25.8 REIMBURSEMENT

25.8.1 Providers enrolled in the ALMWP are reimbursed a per diem rate based on the consumer's level of service needs.

25.8.2 ALMWP providers are reimbursed from a nursing home Turn Around Document (TAD) based on the monthly service rate assigned to the consumer by DSAAPD. The consumer may be assigned one of three possible monthly service levels and may qualify for a supplemental amount as determined by DSAAPD. Refer to the Billing Instructions of this manual for information regarding the completion of the TAD.

25.8.3 Medicaid does not reimburse the assisted living provider for room and board. The consumer is responsible for these charges. Room and board is a flat monthly rate as determined by DSAAPD.

25.8.4 The consumer's patient pay amount is deducted from the monthly payment to the assisted living provider.

25.8.5 Medicaid does not reimburse the assisted living provider for "bed-hold" days (e.g., a bed held for a consumer who is physically absent from the facility because of hospitalization or non-medical/social leave absence).

DIVISION OF SOCIAL SERVICES

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

IN THE MATTER OF: |
|
REVISION OF THE REGULATIONS |
OF THE FOOD STAMP PROGRAM |

NATURE OF THE PROCEEDINGS:

Delaware Health and Social Services (DHSS) initiated proceedings to amend existing regulations contained in the Division of Social Services Manual Section 2023 and 9059. These changes were initiated pursuant to 29 Delaware Code Section 10114 and its authority as prescribed by 31 Delaware Code Section 512.

On June 1, 1999, the DHSS published in the Delaware Register of Regulations (pages 2227-2228) its notice of proposed regulations. The notice requested that written materials and suggestions by interested persons related to this proposal be forwarded by June 30, 1999, at which time the Department would review information, factual evidence and public comment to the said proposed changes to the regulations.

It was determined that no written materials or suggestions had been received from any individual or the public.*

FINDINGS OF FACT:

The Department finds that the proposed changes as set forth in the June 1999 Register of Regulations should be adopted as written.

THEREFORE, IT IS ORDERED that the proposed regulations of the Food Stamp Program are adopted and shall be final effective August 10, 1999.

7/9/99
Gregg C. Sylvester, MD
Secretary

***Please note that no changes were made to the regulation as originally proposed and published in the June 1999 issue of the Register at page 2227 (2:12 Del.R. 2227). Therefore, the final regulation is not being republished. Please refer to the June 1999 issue of the Register or contact the Department of Health and Social Services.**

DEPARTMENT OF INSURANCE

Statutory Authority: 18 Delaware Code, Section 311 (18 **Del.C.** 318)

In the Matter of: | The Amendment of Insurance | Docket Number: Department Regulation No. 56.| 99-20

ORDER

COMES NOW, the Insurance Commissioner of the State of Delaware and in accordance with 18 *Delaware Code* § 311 and 29 *Delaware Code* Chapter 101 Orders as follows:

WHEREAS, the permissible acquired immunodeficiency syndrome test as established by the test protocol set forth in "Attachment No. 1" to Regulation 56 restricts such testing to fluids of blood and oral origin; and

WHEREAS, the Food and Drug Administration authorizes the use of acquired immunodeficiency syndrome tests on bodily fluids other than blood and saliva; and

WHEREAS, the Delaware Department of Public Health supports a revision to the test protocol allowing for the use of FDA approved HIV tests regardless of the bodily fluid on which they are conducted.

NOW THEREFORE, I Order that Regulation No. 56 be amended to strike the restriction against testing fluids other than those of blood and oral origin as reflected in the attached AIDS test protocol, effective August 15, 1999.

SO ORDERED this 7th day of July, 1999.
DONNA LEE WILLIAMS
Insurance Commissioner, State of Delaware

NOTICE OF AMENDED REGULATION

INSURANCE COMMISSIONER, DONNA LEE WILLIAMS hereby gives notice that the testing protocols for Human Immunodeficiency Virus ("HIV") and Acquired Immunodeficiency Syndrome ("AIDS") set forth in Insurance Department Regulation 56 have been amended to conform with revised federal testing guidelines. The sole revision appears in the first paragraph of text of "Attachment No. 1" where the last line containing a restriction on the bodily fluids that may be tested is stricken. Regulation 56 and Attachment No. 1 are attached hereto.

This regulation has been amended in accordance with 18 *Delaware Code* § 311 and 29 *Delaware Code* Chapter 101.

Regulation 56

LIFE AND HEALTH SUBMISSIONS REGARDING ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

Table of Contents

Section 1. Authority

This regulation is promulgated in accordance with 18 Delaware Code Sections 311 and 2714 and 29 Delaware Code Chapter 101.

Section 2. Purpose

The purpose of this regulation is to establish guidelines to prevent discrimination against prospective insureds by life and health insurers when phrasing policy questions or requiring tests relating to Acquired Immunodeficiency Syndrome ("AIDS") or Human Immunodeficiency Virus ("HIV").

Section 3. Testing and Filings Allowed

A. Whenever an applicant is requested to take an AIDS-related test in connection with an application for insurance, the use of such a test must be revealed to the applicant and his or her written consent obtained. The administration of the test must meet the test protocol as established by the Delaware Division of Public Health. (Attachment 1) The results of testing must be maintained in confidentiality between the insured and insurer. The insurer may ask the applicant to designate whether the applicant wants the results forwarded to (1) applicant only, (2) applicant's personal physician, (3) other (list) or (4) no one.

B. Insurers are permitted to ask diagnostic questions. The Department will permit diagnostic questions such as, but not limited to, the following examples:

"Have you ever been treated for or diagnosed as having Acquired Immunodeficiency Syndrome (AIDS) or Human Immunodeficiency Virus ("HIV")?

"Have you ever been told you have Acquired Immunodeficiency Syndrome (AIDS) or Human Immunodeficiency Virus (HIV)?"

Insurers are also permitted to ask predictive questions (i.e., have you tested positive on an AIDS-related blood test) but only if predictive questions are asked by the insurer pertaining to other major life threatening diseases.

Questions which are vague, subjective, unfairly discriminatory, overly technical or ask for the applicant's

opinion are prohibited.

C. Any underwriting use of AIDS-related test information or results, whether acquired by questioning the applicant or by tests administered in accordance with this Regulation, must be strictly limited to the test's predictive value, and used in a balanced way relative to predictive information relating to other life threatening diseases.

D. The Commissioner will disapprove a policy form filing which he determines violates the standards set forth in Section 3.A., B. and C.

Willful disregard of Delaware Insurance Law may subject an insurer to all administrative remedies provided in accordance with 18 *Delaware Code* Sections 106 and 334.

Section 4.Effective Date

This regulation shall become effective February 1, 1998.

(ATTACHMENT NO. 1)

TEST PROTOCOL AS ESTABLISHED BY THE DELAWARE DEPARTMENT OF PUBLIC HEALTH

A medically significant and sufficiently reliable test or series of tests for the presence of HIV, antigen or nonantigenic products of HIV or an antibody to HIV includes one of more of the following. ~~Such tests may be performed on bodily fluids of blood or oral origin.~~

a. A single specimen which is repeatedly reactive using any Food and Drug Administration (FDA) licensed enzyme immunoassay (EIA) HIV antibody test and confirmed positive using an FDA licensed HIV antibody confirmatory test (e.g., Western blot, immunofluorescence assay).

b. A single specimen which is repeatedly reactive using an FDA licensed HIV antigen test and an FDA licensed EIA HIV antibody test. Specimens which are repeatedly reactive to an FDA licensed HIV antigen test shall be confirmed through a neutraliza-tion assay. Specimens which are repeatedly reactive to an FDA licensed EIA HIV antibody test shall be tested with an FDA licensed HIV antibody confirmatory test.

c. A single specimen which is tested for the presence of HIV using a molecular amplification method for the detection of HIV nucleic acids (e.g., polymerase chain reaction, RNA viral load) consistent with the National Committee for Clinical Laboratory Standards.

d. A single specimen which is tested for the presence of HIV using viral culture methods.

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF FISH AND WILDLIFE

Statutory Authority: 7 Delaware Code, Section 103 (7 **Del.C.** 103)

Secretary's Order No. 99-F-0039
Date of Issuance: July 16, 1999

Re: Revision of Regulations Governing Wildlife and Non-Tidal Fishing

I. Background

The Department of Natural Resources and Environmental Control, Division of Fish and Wildlife initiated proceedings to revise existing regulations governing wildlife and non-tidal fishing. The proceedings were initiated pursuant to the Administrative Procedures Act and the Department's authority as prescribed by 7 Del. C. § 103.

On December 1, 1998, the notice of proposed regulation changes was published in the Delaware Register of Regulations (pp. 916-930). On December 29, 1998, at 7:30 p.m., a public hearing was held in the auditorium of the Richardson and Robbins Building at 89 Kings Highway, Dover, Delaware. At the public hearing, the Hearing Officer stated that comments would also be accepted at the meeting of the Council on Game and Fish on January 26, 1999, and that the record of this proceeding would remain open until 4:30 p.m. on January 30, 1999.

By memorandum dated July 16, 1999, the Hearing Officer submitted his report and recommendation, which is hereby explicitly incorporated into this Order by reference.

II. Findings

1) Proper notice of the public hearing was provided as required by law.

2) A public workshop concerning the draft regulations was held on November 10, 1998.

3) The regulations had gone without a complete revision since 1971, and were in need of significant updating.

4) Based upon the testimony received, consideration should be given to closing the season for diamondback terrapin.

5) The changes made to the proposal after it was published in the Delaware Register of Regulations do not constitute significant changes with respect to republishing this regulatory proposal.

6) The proposed changes should be made in the best

interest of the general public of the State of Delaware.

III Order

In view of the above findings, it is hereby ordered that Regulations WR-1 through WR-15 and NT-1 through NT-8 be adopted in the manner and form provided by law. This order shall become effective on August 15, 1999.

Nicholas A. DiPasquale
Secretary

PUBLIC HEARING DECEMBER 29, 1998

WILDLIFE AND NON-TIDAL FISHING REGULATIONS
HEARING OFFICER'S REPORT BY JOHN D. BAKER

TO: Nicholas A. DiPasquale, Secretary
FROM: John D. Baker, Deputy Principal Assistant

DATE:July 16, 1999

RE: Regulations Governing Wildlife and Non-Tidal Fishing

Introduction

Pursuant to § 103 of Title 7, the Department may promulgate regulations to: adjust seasons and bag limits for any species of protected wildlife or freshwater fish, except muskrat; restrict or prohibit the hunting, trapping and/or fishing on any wildlife refuge, lake, stream or pond to conserve any species of wildlife or fish; and generally protect and conserve any species of protected wildlife or freshwater fish, except muskrat. With the Department's regulations having gone without a complete revision since 1971, they are in need of significant updating.

The regulations governing wildlife and non-tidal fishing are being revised to: 1) reflect the enactment of new laws; 2) clarify the meaning of certain terms; 3) eliminate gunning rig permits; 4) allow landowners to remove beavers causing property damage without a permit; 5) limit the number of terrapin that may be taken in one day; 6) clarify the restrictions on harvesting deer and the issuance of Quality Buck Tags; 7) permit the use of bait for deer hunting; 8) provide the lands and waters administered by the Division of Fish and Wildlife with greater protection; and 9) establish rules for falconry; and 10) limit the collection and/or sale of certain wildlife.

START ACTION NOTICE

Former Secretary Christophe A. G. Tulou approved the Start Action Notice (No. 98-26) on October 14, 1998.

PUBLIC WORKSHOP

A public workshop on the proposed regulations was held on Tuesday, November 10, 1998, at 7:30 p.m. in the auditorium of the Richardson and Robbins Building, 89 Kings Highway, Dover, Delaware.
Hearing Officer's Report

DELAWARE REGISTER OF REGULATIONS

The proposed regulations were published in the Delaware Register of Regulations on December 1, 1998 (pp. 916-930).

PUBLIC HEARING

A public hearing on the proposed regulations was held on Tuesday, December 29, 1998, at 7:30 p.m. in the auditorium of the Richardson and Robbins Building, 89 Kings Highway, Dover, Delaware. The hearing record remained open until close of business January 30, 1999. Oral comments were also accepted at the January 26, 1999, meeting of the Council on Game and Fish. Persons present at the public hearing included:

John Baker	Dorothy Miller	Bebe Tarburton
Lloyd Alexander	William Daniels	B. King-Robinson
Andy Manus	Rodney Blanchfield	Michael Scuse
Stephen Gary	Howard Pleasanton	Kitt Heckscher
Robert W. Streets	Robert Dittman	George Ford
Dale A. Streets, Sr.	Dave Wilkins	Mike D'Amico
Bob Leonard	Joe Manno	Lynn McDowell
Carol Tyree	David O'Neil	Virginia Pierce
Dan Beachy	Richard Woten	Rick McCorkle
Bennie Beachy	Kim Crouch	Neil Garrets
Ernie King	Bettie Campbell	Fred Price
Steve Murray	Jimmy Ryan, Jr.	Jeff Minor
Jason Murray	Sam Brittingham	Joe Webb
Charles Wallace	Charlie Burris	Martin Short
Pat McCoy	Dan Clements	Loretta Young
Darin Darke	Joe Clements	Rita Cappelle
James Tapent	Nyle Callaway	Anthony Fasano III
David Carden	Verna Price	Les Bristow
Billy Gosser	Mary Virdin	Paul Burns
John Dukes	Fud Virdin	Karl Severson
Amgerneier	Paula Cable	A J. Silbereisen
Ann Rydgren	Darryl Scuse	Robert Piasciniski
Tammy Huffstetler	Kevin Scuse	Marcellus Petty
Dale Blanton	Chris Asay	Andrew Bullen
Stephanie Casey	Nancy Swaggard	Sue Brebner
Cindy Daniels	Ron Swaggard	Carson Kennard
Ben Daniels	Mick McLaughlin	Brenda Smith
Joshua Daniels	Jeff Bartsch	Mary Manno
Corbit Reynolds	Ralph Willis	Bill Toomey

Kathy Reynolds

The following people presented testimony at the public hearing:

NAME	CAPACITY
Bob Leonard	DE Action of Animals
Carol Tyree	DE Action for Animals & Sierra Club
Don Moore	Trapper
Rick McCorkle	Unknown
Phil Shuman	Unknown
Robert Piasciniski	Unknown
Steve Murray	Unknown
Sue Brebner	Unknown
Ralph Willis	Unknown
Ron Swaggard	Unknown
Bob Dittman	Unknown
Betty Campbell	Unknown
Paula Cable	Unknown
Dorothy Miller	Unknown
Chris Asay	DE Falconry Heritage Association
Ann Rydgren	Unknown
David O'Neill	Delmarva Ornithological Society
Virginia Pierce	Tri-State Bird Rescue
Andrew Bullen	Falconer
Kitt Heckscher	Unknown
Paul Burns	Falconer
Ucett Petty	Falconer

SUMMARY OF EVIDENCE

One hundred people (approximately) were in attendance at the public hearing on December 29, 1998. In addition to the testimony provided by twenty-two people at the hearing, written comments and documentation submitted for the record during the open comment period was considered in the development of the final regulations.

DIVISION OF FISH AND WILDLIFE

The Hearing Officer with assistance from Lloyd Alexander, Wildlife Administrator, gave a brief overview of the proposed regulations. The Hearing Officer then requested public comments on each regulation.

TESTIMONY ON PROPOSED REGULATIONS

Beaver Season

– Ms. Tyree testified against the proposed season. She expressed concerns relating to the process for receiving and responding to complaints about beavers and submitted for the record her ideas for improving the process.

– Mr. Leonard also testified against the proposed season. He expressed the following concerns: there was insufficient supporting data to warrant a season; the season was exceptionally long; there was no limit on the number of beaver that could be taken during a season; and any beaver taken should be documented. Mr. Leonard recommended that a study be done by the state to evaluate data needs and management options. He submitted a "purpose statement" for forming a Delaware Beaver Plan Committee and a document titled "Guiding Principles for the Beaver Community."

– Mr. Moore testified in support of the proposed beaver season. Being a trapper, he said that he was getting a lot of complaints about beaver damage to crops and fruit trees. He thought the current permit system was overly bureaucratic and a season would benefit landowners by allowing them to respond to beaver problems more quickly.

– Mr. Shuman and Ms. Brebner expressed concern about the documentation available on beaver damage in Delaware.

– Mr. Piascinski testified in support of the proposed regulations and stated they were long overdue.

Raccoon Season

– Mr. Murray expressed concern for himself and "about 40" other raccoon hunters that the season for hunting raccoon was being shortened unnecessarily as deer seasons have been expanded. Because raccoon hunting takes place at night and deer hunting during the day, he did not see a conflict.

Terrapin Season

– Mr. Shuman testified that the taking of terrapin should be limited to the winter months in order to avoid their breeding and nesting season. He recommended something similar to the season in New Jersey. During the public workshop, Mr. Bud Schilling suggested that the season might as well be closed if the daily bag limit of four was imposed. A season closure was also recommended in written material submitted for the record by staff from the Division of Fish and Wildlife

Horseback Riding

– Mr. Swaggard, Mr. Dittman, Ms. Campbell and Ms. Cable promoted horseback riding in state wildlife areas through their testimony, and requested that they not be limited to the roads. They suggested that horseback riding was compatible with wildlife and would not conflict with the other activities that occur in these areas.

– Mr. McCorkle testified that if additional land were made available to horseback riding, it must be regulated with consideration being given to the impact on rare plants, ground nesting birds, etc.

Falconry

– Mr. Asay testified against the following: the issuance

of separate permits to take raptors from the wild; the banding of non-endangered raptors; the "retiring" of raptors for the day in the event wildlife is taken during a closed season for such wildlife; and the mandatory supervision of an Apprentice Class falconer by his or her sponsor when raptors are being taken from the wild. He thought the hunting season for falconry should be extended to March 30, and suggested that the provisions relating to the sale of raptors and trespassing were already addressed by state law or the federal falconry regulations.

– Mr. Bullen and Mr. Burns testified against many of the same provisions that Mr. Asay testified against. They also testified against the limit on the number of nestlings that could be taken and the restriction on the time raptors could be released to the wild. Mr. Burns, however, did not have a problem with the banding requirement.

– Ms. Rydgren, Mr. O'Neill, Dr. Pierce and others testified against the taking of nestling kestrels. (The proposed regulations that were distributed at the public hearing permitted the taking of nestling kestrels.)

– Dr. Pierce and others testified in support of the requirement that there be supervision of Apprentice Class falconers when raptors are taken from the wild.

Collection of Nongame Wildlife

– Mr. Shuman testified that regulation was overly restrictive since it would prohibit the return of any nongame wildlife to the wild and did not allow for temporary collections for educational purposes.

Gunning Rigs

– Mr. Piascinski recommended that all distances related to shooting waterfowl from boats be standardized at 1500 feet to make the regulations more understandable.

FINDINGS OF FACT

Beaver Season

– The Division recognizes the important role beavers play in the creation of freshwater wetlands and the promotion of biodiversity. A beaver management plan was developed in 1991 with extensive review. Since 1991, the beaver population has expanded greatly and the Division is no longer able to deal with beaver problems through direct assistance to landowners. Delaware is the only state in the region that does not have an open beaver season.

– In order to further study alternatives for beaver management, the final regulation will allow landowners the opportunity to remove up to eight beavers causing damage to their property without obtaining a permit from December 1 to March 20, provided they report any beavers taken by April 1. This is an interim action to relieve beaver damage problems for landowners without opening up a general season. Landowners will still be able to apply for damage permits to take problem beavers. The Division will continue to evaluate the potential for a general beaver season in the future and all management options that allow beavers to coexist with humans in the state.

Raccoon Season

– The Division recognizes that deer hunting and raccoon hunting may be able to coexist with minimal conflicts, especially outside of the primary shotgun season for deer. In response to the testimony provided by Mr. Murrey, the final regulation will allow raccoon hunting during the December and January firearm deer seasons from 7:00 p.m. until midnight.

Terrapin Season

– There is good evidence that the population of terrapin is very low in the state. Because closing the season was judged to be a "substantive" change, it was determined that further regulatory action will be required in the future to possibly close the season. The Division will also pursue the option of requiring turtle excluder devices on crab pots that are set in the Inland Bays, estuary rivers and shallow water areas of the Delaware Bay that have the potential for drowning large numbers of diamondback terrapin.

Horseback Riding

– The final regulation is similar to the regulation that has been in force for more than two decades. Horseback riding has the potential to destroy wildlife habitat and conflicts with other users of the wildlife area system. The language relating to the opening of trails to horseback riding was added in response to the concerns raised by trail riders.

Falconry

– A separate permit system for taking raptors is necessary in order to insure that the maximum number of birds to be taken each year is not exceeded. The dates for hunting with falconry will be extended beyond the gun season, however, the Division intends to take a conservative approach to assess the effect of falconry. The requirement to "retire" birds that take wildlife during a closed season will discourage falconers from hunting practices that result in the taking of such wildlife. The language on sale and trespassing to take raptors was retained to make Delaware regulations clear in these areas.

– The Division believes state restrictions are necessary to insure that falconry does not adversely affect wildlife populations. The banding requirement will provide a source of data to objectively measure the effects of falconry in the state. The release of birds to the wild at times when they are not normally found in the state may compromise their ability to adjust to the wild.

– The regulation was retained to require supervision of apprentices in order to insure that the best falconry

techniques are employed, but the supervision was broadened to include any Master or General falconer instead of only the sponsor.

– The Division recognizes that the status of nesting kestrels is uncertain in Delaware and will not permit their taking until such time as adequate information is available to justify such taking.

Collection of Nongame Wildlife

– The final regulation responds to the testimony provided by Mr. Shuman by allowing the temporary possession of reptiles and amphibians for up to 30 days. The regulation was also narrowed in scope from all nongame wildlife to reptiles and amphibians because no evidence was found to indicate that noncommercial collections of other taxa are a problem in Delaware.

Gunning Rigs

– The Division recognizes the importance of standardizing as many regulations as possible and accepts the proposal to limit gunning rigs 1500 feet from shore in the zone that extends from the Smyrna River to the Murderkill River. However, the distance of 900 feet from shore was retained in the zone between the Appoquinimink and Smyrna rivers because it is impractical to hunt 1500 feet from shore in this area.

CONCLUSIONS

The proposed regulations, as modified, should be enacted for the reasons stated in the introduction.

[~~REGULATION WL1.~~ WR-1.] DEFINITIONS.

[For purposes of WR-2 through WR-15 and NT-1 through NT-8, the following words and phrases shall have the meaning ascribed to them, unless the context clearly indicates otherwise:]

[(1) "Administered by the Division" shall mean owned, leased or licensed by the Division.]

[~~(1)~~(2)] "Antlered deer" shall mean any deer with one or more antlers three inches long or longer, measured from the base of the antler where it joins the skull to the tip of the antler following any curve of the antler.

[(3) ~~An~~] "Antlerless deer" shall **[~~be defined as~~ mean]** any deer that has no antlers or antlers less than three inches in length.

[~~(3)~~(4)] "Bait" shall mean **[any nontoxic]** food material, compound or mixture of ingredients which wildlife is able to consume.

[~~(2)~~(5)] "Baited field" shall **[~~be widely defined to~~]** include any farm field, woodland, marsh, water body or other tract of land where **[minerals,]** grain, **[fruit, ~~salt or~~]** crop **[or other nontoxic compounds ~~has~~ have]** been placed to attract wildlife to be hunted.

[~~(19)~~(6)] "**[Designated]** trout stream" **[~~is any body of water or part thereof as designated by the Department upon notice of such designation being published in at least one newspaper of general circulation throughout the State at least five days in advance of the opening of the trout season~~ shall mean:**

a. Christina Creek, from the boundary line between this State and the State of Maryland through Rittenhouse Park;

b. White Clay Creek, from the boundary line between this State and the Commonwealth of Pennsylvania to the downstream side of Paper Mill Road;

c. Pike Creek, from Route 72 to Henderson Road;

d. Mill Creek, from Brackenville Road to Route 7;

e. Wilson Run, from Route 92 through Brandywine Creek State Park; and

f. Beaver Run, from the boundary line between this State and the Commonwealth of Pennsylvania to the Brandywine River].

[~~(5)~~(7)] "Director" shall mean the Director or Acting Director of the Division **[~~of Fish and Wildlife of the Department~~]**.

[~~(6)~~(8)] "Division" shall mean the Division of Fish and Wildlife of the Department.

[~~(7)~~(9) ~~An~~] "Endangered species" shall **[~~be those species of the animal kingdom listed as endangered or threatened by the U.S. Department of Interior; those species listed by the Delaware Natural Heritage Program ranking system as S1, S2 if susceptible to extirpation, SH and SX; and other species listed by regulatory action~~ mean any species of fish or wildlife designated by regulation of the Department as being in danger of extinction throughout all or a significant portion of its range, or determined by the Secretary of Commerce or the Secretary of the Interior to be an endangered species in accordance with the Endangered Species Act of 1973, as amended]**.

[~~(8)~~(10) ~~An~~] "Established blind" shall **[~~be a waterfowl blind erected by a landowner on their property for the purpose of taking migratory waterfowl or a blind erected for the purpose of taking migratory waterfowl on another's property with the consent of the landowner~~ mean a structure or pit constructed for the purpose of hunting migratory waterfowl by a landowner on his or her property or by another person with the permission of the landowner or the landowner's duly authorized agent]**.

[~~(9)~~(11) ~~An~~] "Established road" shall **[~~be~~ mean]** a road maintained for vehicular use by the Division and **[~~authorized~~ designated for such]** use by the Division on **[current]** wildlife area maps.

[(10)(12)] "**[Fish Fishing]**" or "to fish" shall mean to take, catch, kill or reduce to possession or attempt to take, catch, kill or reduce to possession any **[freshwater]** fish by any means whatsoever.

[(13)] "Game fish" [**are defined as shall include**] smallmouth bass, largemouth bass, black or white crappie, rock bass, white bass, walleye, northern pike, chain pickerel, muskellunge (or hybrids), salmon, trout, sunfishes and white bass/striped bass hybrids.

[(11)(14)] "Liberated game" **[are those animals released pursuant to 7Del.C.585, and from captive stock or legally imported into the State of Delaware. Such animals include the shall mean]** cottontail **[rabbit rabbits and game birds, including]** bobwhite quail, mallard duck, chukar and pheasant**[, released pursuant to § 568 of Title 7]**.

[(12)(15) A] "**[Loaded]** muzzle-loading rifle" shall **[be considered "loaded" if mean]** the powder and ball, bullet or shot is loaded in the bore. A muzzle-loading rifle shall not be considered loaded if the cap, primer, or priming powder (in a flintlock) is removed and**[:]**

[a.] The striking mechanism **[or nipple]** used to ignite the cap, primer or priming powder is removed **[or rendered inoperable; or]**

[b. The rifle is enclosed in a case].

[(4)(16)] "Lure" shall mean any mixture of ingredients, element or compound **[which that]** attract wildlife, but the wildlife is unlikely to consume.

[(13)(17)] "Longbow" shall mean a straight limb, reflex, recurve or compound bow. All crossbows or variations thereof and mechanical holding and releasing devices are expressly excluded from the definition.

[(14)(18)] "Nongame wildlife" shall mean any native **[animal species not commonly under the domestication of man, except those species defined by statute or regulation as game and fish wildlife, including rare and endangered species, which are not commonly trapped, killed, captured or consumed, either for sport or profit]**.

[(15)(19)] "Possession" **[in addition to its ordinary meaning, includes the location in or about the defendant's person, premises, belongings, vehicle or otherwise within his reasonable control shall mean either actual or constructive possession of or any control over the object referred to]**.

[(16)(20) A] "Refuge" **[is an area of the state owned or any other lands designated by the Department as a refuge. A landowner other than the State of Delaware may request that certain of their lands be designated a refuge and will be so designated, with the Department's approval, if such designation shall mean an area of land, whether in public or private ownership, designated by the Department as a refuge. Land shall only be designated with the permission of the landowner and if such designation]** is thought to be in the best **[interested interest]** of the conservation of wildlife. Refuges shall normally be closed at all times to all forms of hunting, except as permitted by the Director in writing for wildlife management purposes.

[(21) "Restricted trout stream" shall mean the White Clay Creek from a point 25 yards above Thompson Bridge at Chambers Rock Road to the boundary line between this State and the Commonwealth of Pennsylvania].

[(17)(22) The term] "Roadway" shall **[include all roads and their associated rights-of-ways that are owned by the Delaware Department of Transportation, county or mean any road, lane or street, including associated right-of-ways, maintained by this State or any]** political subdivision of this State.

[(18)(23)] "**[Seasons Season]**" shall **[be those periods mean that period]** of time during which **[a]** designated species of wildlife may be lawfully hunted **[pursuant to regulation of the Department or a designated species of fish may be lawfully fished]**.

[(20)(24)]"Wildlife" shall **[be mean]** any **[animal species not commonly under the domestication of man, including but not limited to those animals defined by statute as game or protected wildlife or freshwater fish member of the animal kingdom, including without limitation, any amphibian, arthropod, bird, mammal or reptile]**.

[(21)(25)] "Vehicle" shall include any means in or by which someone travels or something is carried or conveyed or a means of conveyance or transport, whether or not propelled by its own power.

[HUNTING WILDLIFE REGULATIONS]

[REGULATION WL13. WR-2.] METHOD OF TAKE.

Section 1. General.

[It shall be unlawful to hunt any protected wildlife with any weapon other than a bow and arrow, a shotgun not larger than number 10 gauge, 22 caliber rimfire pistol for taking raccoons or opossums or other wildlife that is lawfully confined in a trap, or a muzzle-loading rifle with a barrel length of twenty inches or more during the lawful primitive deer hunting season; except that frogs may be taken with a hook, spear or gig and snapping turtles may be taken by spear, gig, trap or net;

~~or as otherwise provided by law.~~

Unless otherwise provided by law or regulation of the Department, it shall be unlawful to hunt any protected wildlife with any weapon or firearm other than a longbow or shotgun (10 gauge or smaller), except that:

(1) A crossbow may be used in lieu of a shotgun to hunt deer during that part of the November shotgun season that runs from Monday through Saturday of each year and in any shotgun or muzzleloader deer season open in December or January;

(2) A muzzle-loading rifle with a barrel length of at least twenty inches may be used to hunt deer during the primitive firearms season;

(3) A .22 caliber rimfire pistol may be used to hunt raccoons and opossums and to take wildlife lawfully confined in a trap;

(4) A hook, spear or gig may be used to take frogs; and

(5) A spear, gig, trap or fyke net may be used to take snapping turtles.]

Section **[~~4.~~ 2.]** Bow and Arrow.

(a) General. – No person shall use or have in **[~~their~~ his or her]** possession **[~~or under their control~~]**, while hunting, any: poison arrow, arrow with explosive tip, or any bow drawn, held or released by mechanical means, except the Director may issue permits to hunters who are permanently disabled to use crossbows, provided **[~~the applicant has a physician's certification that he or she is unable to use conventional archery equipment. Effective September 1, 1993, Hunters with the following disabilities shall be eligible for crossbow permits~~]**:

[(1) The applicant has a physician's certification that he or she is unable to use conventional archery equipment;]

[(2 ~~Full confinement to~~ The applicant has a disability that requires the use of] a wheelchair;

[(3) The applicant is a] single or double amputee above the elbow, or **[~~be~~]** a double amputee below the elbow;

[(4) The applicant has a] permanent physical disorder which cannot be surgically corrected and prevents the use of an arm or hand;

[(5) The applicant has] lung disease to the extent that forced (respiratory) expiatory volume for one (1) second when measured by spirometer is less than one (1) liter or arterial oxygen tension (po) is less than 60 mm/Hg on room air at rest; or

[(6) The applicant has] cardiovascular disease to the extent that functional limitations are classified in severity as class III or class IV according to standards accepted by the American Heart Association.

(b) Crossbows. – **[~~Crossbows may be used in lieu of shotguns for hunting deer during periods designated by the Department.~~]** Crossbows used for deer hunting must be between 125 and 200 pounds of pull weight, manufactured after 1980, and have a mechanical safety.

Section **[~~5.~~ 3.]**Hunting from Boats.

(a) Distance from Blinds. – During the season for the hunting of migratory waterfowl, it shall be unlawful for any person to hunt **[~~any wildlife, other than to tend traps set for wildlife lawfully trapped for their hides, while such person is in~~ from]** a boat of any kind that is within 1500 feet of an established blind, except that:

[(1) Any person may use a boat to tend lawfully set traps for fur-bearing wildlife;]

[(2)] Any person may retrieve crippled waterfowl by the use of a boat in accordance with federal regulations;

[(3 ~~and except that~~] Any person may use a boat for transportation to and from an established blind lawfully used by **[~~him~~ such person]**;

[(4 ~~and except that a~~ Any] person may hunt from a boat that is firmly secured and enclosed in an established blind.

[(b)] Notwithstanding the provisions of **[~~this section~~ subsection (a) of this section]**, any person may hunt migratory waterfowl within 1500 feet of an established blind, from a boat, with permission of the blind owner.

[~~(b)~~(c)] Gunning Rigs.

[(1)] During the season for hunting migratory waterfowl, it shall be unlawful for any person to hunt **[~~in~~ within 900 feet of the shoreline (high tide line) of]** the Delaware River and Bay, **[~~on the Delaware side of the ship channel, from~~ between]** the Appoquinimink River **[~~south to Murderkill River, within 300 yards of shoreline high tide line)~~ and the Smyrna River]**, without written permission of the closest adjoining landowner(s).

[(2) During the season for hunting migratory waterfowl, it shall be unlawful for any person to hunt within 1500 feet of the shoreline (high tide line) of the Delaware River and Bay, between the Smyrna River and the Murderkill River, without written permission of the closest adjoining landowner(s).]

[(d) Tender Boats. –] It shall be unlawful for tender boats servicing gunning (layout) rigs to be further than **[~~800 yards~~ 1500 feet]** from the rig or to conduct any activity, except to pick up downed birds or service the rig.

[(e) During the season for hunting migratory waterfowl,] it shall be unlawful **[for any person]** to hunt from a boat, or a floating or fixed blind in the Little River in

areas bounded on both sides by [**~~State~~**] land **[administered by the Division]**, except as permitted in writing by the Director.

Section **[~~9.~~ 4. ~~Placement of~~]** Leghold Traps.

[~~Subsection 1.~~]

(a) **[~~No person shall~~ It shall be unlawful for any person to]** set a leghold trap at any time in this State, except from December 1 through March 10 (March 20 on embanked meadows) in New Castle County and December 15 through March 15 in Kent and Sussex counties **[~~and after obtaining the landowner's or their authorized representative's consent~~]**.

(b) **[~~In addition to the time periods stated above,~~] Notwithstanding subsection (a) of this section,** it shall be lawful **[~~with permission of the landowner~~]** to **[~~use~~ trap raccoons with]** leghold traps in New Castle County or Kent County from the southerly boundary of New Castle County Route 380 and east and southeast of the center line of U.S. Route No. 13, thence following said center line of U.S. Route No. 13 to the point where U.S. Route No. 13 forms a junction with U.S. Route No. 113 and thence along the center line of U.S. Route No. 113 to a line dividing Kent County from Sussex County during any time of the year, except on Sundays. **[Notwithstanding the foregoing, this subsection shall not apply to lands in Kent County lying east of the center line of Rt. 113, north of the Sussex County line and south of the St. Jones River]**.

[~~Subsection 2.~~]

[~~(a)~~(c) ~~No person shall~~ It shall be unlawful for any person to] set long-spring **[traps,]** "Stop-Loss" traps or jump traps larger than No. 1½ or coil-spring traps larger than No. 1 in any location, except:

(1) In any marsh ordinarily subject to the rise and fall of the tide;

(2) In a diked marsh that was formerly tidal;

(3) Below the mean high tide line in a river ordinarily subject to the rise and fall of the tide;

(4) On an island surrounded by tidal marsh or diked marsh that was formerly tidal; or

(5) In the areas described in **[~~Subsection 1(b)~~ subsection (b)]** of this section.

The term "diked marsh" **[~~does~~ shall]** not include millponds or any stream running into a millpond.

[~~(b)~~(d)] In addition to the areas listed in **[~~paragraph (a) of this~~ subsection (c) of this section]**, traps described in **[~~this~~ said]** subsection may be set for river otter **[and/or beavers in tax ditches,]** millponds and streams leading into such ponds only by underwater sets**[~~, and only by special permit. Said permit will be issued free of charge by the Division for underwater sets to landowners who specify the names of persons who will trap their land~~]**.

[~~(c)~~(e) ~~No person shall~~ It shall be unlawful for any person to] set or make use of long-spring **[traps, ~~or~~]** "Stop-Loss" traps or jump traps larger than No. 1½ or coil-spring traps larger than No. 1 without first permanently attaching a metallic tag on each trap, bearing **[~~in plain English~~]**:

(1) The words "Trapping License, Delaware", the number of the trapping license issued to the owner of the traps and the year of issuance; or

(2) The owner's name and address.

[~~(d) In addition to the areas listed in paragraph (a) of this subsection, traps described in this subsection and live traps may be set for beaver only by underwater sets and only by special permit. Said permit will be issued free of charge by the Division to landowners or their agents. Applications must describe the location to be trapped and contain the names of persons who will conduct the trapping.~~]

[~~Subsection 3.~~]

[~~(a)~~(f) ~~No person shall~~ It shall be unlawful for any person to] set a long-spring **[trap, ~~or~~]** "Stop-Loss" trap, **[~~or~~]** jump trap No. 1½ or smaller or a coil-spring trap No. 1 or smaller in any location in this State, except in the **[~~area~~ areas]** described in **[~~subsection 2~~ subsections (c) and (d)]** of this section and in the following locations:

[~~(1) A marsh of any size ordinarily subject to the rise and fall of the tide; or~~]

[~~(2)~~(1)] A ditch; **[~~or~~]**

[~~(3)~~(2)] A stream; or

[~~(4)~~(3)] On land not subject to cultivation of crops due to a normally marshy condition.

[~~(c)~~(g)] For the **[~~purpose~~ purposes]** of **[~~this~~]** subsection **[(f) of this section]**, the term "ditch" **[~~is defined as~~ shall mean]** a long, narrow channel dug into the earth as a trough for drainage or irrigation of the soil **[~~which~~ that]** normally contains flowing water.

[~~(b)~~(h)] For the **[~~purpose~~ purposes]** of **[~~this~~]** subsection **[(f) of this section]**, the term "normally marshy condition" **[~~is defined as~~ shall mean]** land with one or more of the following associated plant groupings growing upon it: cordgrass, sedges, rushes, cattails, threesquare or phragmites.

[~~Subsection 4.~~]

[(i)] When information is furnished to a Fish and Wildlife Agent from the owner, tenant or sharecropper of any land that any species of wildlife is detrimental to crops, property or other interests on land on which he **[or she]** resides or controls, upon investigation, that Fish and Wildlife Agent may issue a permit to such person or his **[or her]**

agent for the use of leghold traps to control said species of wildlife. Said permit may be issued at any time of the year.

[~~Subsection 5.~~]

[j] The setting of each trap in violation of this section shall be a **[~~single~~ separate]** offense.

Section **[~~2.~~ 5.]**Gray Squirrel.

Hunting gray squirrels with a .22 caliber rimfire rifle or muzzle-loading rifle not larger than .36 caliber firing a round projectile is permitted south of the Chesapeake and Delaware Canal during that part of the gray squirrel season which is not concurrent with the rabbit, quail or pheasant seasons as they are described in **[~~Regulation~~]** WR-**[~~17~~ 4]**.

Section **[~~6.~~ 6.]**Muskrats.

[~~No person shall~~ It shall be unlawful for any person to] shoot muskrats at any time, except with written permission of the Director.

Section **[~~7.~~ 7.]**Otters.

[~~Every~~ Each] otter trapped in Delaware must be tagged by an authorized representative of the Division. **[~~All otters~~ Each otter]** sold in Delaware or shipped out of the State must be tagged in accordance with the requirements of the **[~~Endangered Species Scientific Authority, an agency of the U.S. Department of Interior~~ Convention on International Trade in Endangered Species]**.

[Section 8. Red Fox.]

Red foxes may be **[~~shot~~ killed ~~during the season established by~~ in accordance with]** § 788 of Title 7 with the following **[~~weapons and projectiles~~]**: bow and arrow; shotgun with shot up to size 2 lead or T steel; rimfire rifle **[or]** centerfire rifle up to .25 caliber using hollow point bullets with a maximum bullet weight of 75 grains; or a muzzle-loading rifle.

[~~REGULATION WL16.~~ WR-3.] FEDERAL **[LAWS AND]** REGULATIONS ADOPTED.

Section 1. Federal Laws.

It shall be unlawful for any person to hunt, buy, sell or possess any **[~~migratory game bird~~ protected wildlife]** or part thereof, except in such manner and numbers as may be prescribed by **[the following federal laws and]** regulations promulgated **[~~under the provisions of the Federal Migratory Bird Treaty Act~~ thereunder: Airborne Hunting Act (16 USC § 742j-l et seq.), Eagle Act (16 USC § 668 et seq.), Endangered Species Act (16 USC 1531 et seq.), Lacey Act (16 USC § 3371 et seq.), Marine Mammal Protection Act (16 USC § 1361 et seq.), and the Migratory Bird Treaty Act (16 USC § 703 et seq.). ~~Provided, however, that such federal regulations shall not apply if the Department or other provisions of the Delaware Code may prescribe further restrictions for the taking of migratory waterfowl.~~ Notwithstanding the foregoing, the federal laws and regulations shall be superseded by more stringent restrictions prescribed by State law or regulation of the Department.]**

Section 2. Sea Ducks.

Scoters, eiders and old squaw ducks may be taken during their special season not less than 800 yards seaward from the Delaware Bay shore beginning at an east/west line between Port Mahon and the Elbow Cross Navigation Light south to the Atlantic Ocean or in the Atlantic Ocean.

Section 3. Non-toxic Shot.

(a) Required Usage. – Non-toxic shot, as defined by federal regulations, shall be required for waterfowl hunting in Delaware. It shall be unlawful **[for any person]** to possess shells loaded with lead shot while waterfowl hunting.

(b) Maximum Shot Size. – It shall be unlawful **[for any person]** to hunt, except for deer, in Delaware with any size non-toxic shot (as defined by federal regulations) pellet(s) larger than size T (.20 inches in diameter).

Section 4. Special Mallard Release Areas.

The Division may issue permits to allow the taking of captive-reared mallards during the established waterfowl season under applicable federal regulations. Permits **[~~will~~ shall]** only be issued to persons who control **[at least]** 100 acres of land **[~~including~~ on which there is]** suitable waterfowl habitat; agree to follow a management plan and federal regulations; **[and]** maintain a log of guests and birds harvested. Failure to follow the management plan or **[a]** violation of State or federal laws may result in the revocation of a Special Mallard Release Area Permit. Waterfowl may only be hunted on Special Mallard Release Areas from one-half hour after sunrise to one hour before sunset.

[~~REGULATION WL17.~~ WR-4.] SEASONS.

Section **[~~18.~~ 1.]** Season Dates.

Specific dates for hunting seasons will be published officially each year in an annual publication entitled the "Delaware Hunting and Trapping Guide."

Section **[2. General.]**

It shall be unlawful **[for any person]** to hunt those species of wildlife for which a season is designated at any time other than during that season.

[~~Section 13. Closed Seasons.~~

~~It shall be unlawful to hunt any game animals [or game birds], except as provided by the regulations and statutes of the State of Delaware or by the federal statutes and regulations governing migratory game birds.~~]

Section **[~~1.~~ 3.]**Protected Wildlife.

[(a) Unless otherwise provided by law or regulation of the Department,] it shall be unlawful **[for any person]** to hunt**[~~, sell, ship or possess~~]** any species of protected wildlife**[~~, except as permitted by law~~]**.

[(b) It shall be unlawful for any person to sell, transport or possess any species of protected wildlife, except when:

(1) Otherwise provided by law or regulation of the Department; or

(2) The wildlife was lawfully taken outside of this State in accordance with the laws or regulations of the state or nation where the wildlife was taken.]

Section **[~~2.~~ 4.]**Beaver.

[(a) ~~Beavers may be hunted or trapped in accordance with the statutes and regulations of the State of Delaware governing the taking of beavers: From December 1 to March 20 of each year, with a daily limit of four. Landowners or their agents may obtain a permit from the Division to take, possess and sell beavers causing damage on their property at any time.~~ Unless otherwise authorized by law or regulation of the Department, it shall be unlawful for any person to hunt or trap beaver during any period of the year, however, from December 1 through March 20, landowners (or their agents) may take up to eight beavers from their property without a permit, provided:

(1) Beavers are damaging crops or other property;

(2) The property damage is certified by the landowner; and

(3) The number of beavers taken is reported to the Division by April 1.]

[(b)] Beaver hides and the meat of lawfully taken beaver harvested anywhere within or outside of Delaware may be sold.

Section **[~~12.~~ 5. ~~Frog~~ Bullfrogs]**.

(a) **[~~Open~~]** Season **[*~~for Bullfrogs~~*]**. – Bullfrogs (Rana catesbiana) may be hunted in accordance with the statutes and regulations of the State of Delaware governing the hunting of bullfrogs: from May 1 through September 30 **[~~of each year~~]**.

(b) Limit. – **[~~The daily aggregate limit for hunting bullfrogs shall be twenty four (24) with either a hunting and/or a fishing license.~~ It shall be unlawful for any person to take more than twenty-four (24) bullfrogs in any one day.**

(c) License. – A hunting or fishing license is required to take bullfrogs.]

Section **[~~15.~~ 6.]** Crows.

It shall be unlawful for any person to hunt common crows during any period of the year, except Thursdays, Fridays and Saturdays between and including the fourth Thursday of June and the last Saturday of March **[~~each succeeding year~~]**, unless said person holds a valid depredation permit. The hunting of crow is restricted only by the provisions of federal regulations pertaining to the taking of common crows. Crows may be taken without a permit when committing damage or about to commit damage.

Section **[~~6.~~ 7.]** Gray Squirrel.

[(a) Season. –] Gray squirrel may be hunted in accordance with the statutes and regulations of the State of Delaware governing the hunting of gray squirrel: from September 15 (September 14, if September 15 is a Sunday) through the first Saturday in November; and from the Monday that immediately precedes Thanksgiving through the day that precedes the January shotgun**[~~/muzzleloader~~]** deer season. Squirrel hunting shall be unlawful during any period and in any area when it is lawful to hunt deer with **[~~firearms~~ a firearm]**.

[(b) Limit. – ~~The daily limit shall be four~~ It shall be unlawful for any person to take more than four gray squirrels in any one day].

Section **[~~3.~~ 8.]** Opossum.

The opossum may only be hunted or trapped during the lawful season to hunt or trap raccoons.

Section **[~~8.~~9.]** Pheasant.

[(a) Season. –] Male pheasant may be hunted in accordance with the statutes and regulations of the State of Delaware governing the hunting of pheasant: from the Monday that immediately precedes Thanksgiving through the day that precedes the January shotgun**[~~/muzzleloader~~]** deer season, except that **[no pheasant hunting shall be**

lawful during any period when it is lawful to hunt deer with a firearm. Notwithstanding the foregoing,] pheasant may be hunted during the December firearm deer **[seasons season when hunter orange is displayed in accordance with § 718 of Title 7 ~~when the hunter wears 400 square inches of blaze (hunter) orange on the head, back and chest combined~~]**.

[~~Subsection A.~~ (b)] Female Pheasant. – It shall be unlawful for any person to hunt or possess any female pheasant at any time, except as permitted on licensed shooting preserves, by licensed game breeders or **[as]** otherwise **[~~as~~]** permitted by law.

[~~Subsection 2.~~ (c)] Male Pheasant Limit. – It shall be unlawful for any person to hunt or possess more than two (2) male pheasants in any one day during the pheasant season, except as permitted by law.

[~~Subsection 3.~~ (d)] Scientific or Propagating Purposes. – It shall be unlawful **[for any person]** to possess pheasants for scientific and propagating purposes without a valid permit from the Director.

[~~Subsection 4.~~ (e)] Shooting Preserves. – Nothing in this regulation shall be construed so as to limit the number or sex of pheasants that may be harvested by any one person on restricted experimental, propagating and shooting preserves **[~~as provided in Regulation WL21~~]**.

Section **[~~9.~~ 10.]** Quail.

[(a) Season. –] Bobwhite quail may be hunted in accordance with the statutes and regulations of the State of Delaware governing the hunting of bobwhite quail: from the Monday that immediately precedes Thanksgiving through the first Saturday of February, except that no quail hunting shall be lawful during any period when it is lawful to hunt deer with a firearm**[~~, except that~~. Notwithstanding the foregoing,]** quail may be hunted during the December or January firearm deer seasons when **[~~the hunter wears 400 square inches of blaze (hunter) orange on the head, back and chest combined~~ hunter orange is displayed in accordance with § 718 of Title 7]**.

[(b) Limit. – ~~The daily limit shall be six~~ It shall be unlawful for any person to take more than six quail in any one day].

Section **[~~7.~~ 11.]** Rabbit.

[(a) Season. –] Rabbits may be hunted in accordance with the statutes and regulations of the State of Delaware governing the hunting of rabbits: from the Monday that immediately precedes Thanksgiving through the first Saturday in February, except that no rabbit hunting shall be lawful during any period when it is lawful to hunt deer with a firearm**[~~, except that~~. Notwithstanding the foregoing,]** rabbit may be hunted during **[the]** December or January firearm deer seasons when **[~~the hunter wears 400 square inches of blaze (hunter) orange on the head, back and chest combined~~ hunter orange is displayed in accordance with § 718 of Title 7]**.

[(b) Limit. – ~~The daily limit shall be four.~~ It shall be unlawful for any person to take more than four rabbits in any one day.]

Section **[~~10.~~ 12.]** Raccoon.

(a) Trapping Season. – Raccoon may be trapped in accordance with the statutes and regulations of the State of Delaware **[governing the trapping of raccoon]**: from December 1 **[~~to~~ through]** March 10 **([~~season closed~~]** March 20 on embanked meadows) in New Castle County; and from December 15 **[~~to~~ through]** March 15 in Kent and Sussex counties. The season is open throughout the year **[on private land, except on Sundays,]** in eastern New Castle and Kent counties pursuant to § 786 of Title 7 **[and Section 4(b) of WR-2]**.

(b) Hunting Season. – Raccoon may be hunted in accordance with the statutes and regulations of the State of Delaware **[governing the hunting of raccoon]**: from September 1 (September 2, if September 1 is a Sunday) through October 31 for chase only whereby **[it shall be unlawful to kill]** raccoon and opossum **[~~may not be killed, except that the season shall be closed during all periods of the muzzleloader deer season~~]**; from November 1 through the last day of February**[~~, except closed the entire period of the shotgun and/or muzzleloader seasons for deer~~]**; and from March 1 through March 31 for chase only whereby **[it shall be unlawful to kill]** raccoon and opossum **[~~may not be killed~~]**. **[~~As provided by S 791 of 7 Delaware Code, certain areas are open throughout the year to kill raccoon except during the shotgun/muzzleloader deer seasons.~~ The season is open throughout the year on private land in eastern New Castle and Kent counties, except on Sundays, pursuant to § 786 of Title 7.**

(c) Notwithstanding subsection (b) of this section, it shall be unlawful for any person to hunt raccoon or opossum during any period when it is lawful to hunt deer with a firearm, except that it shall be lawful to hunt raccoon from 7:00 p.m. until midnight during the December and January firearm deer seasons.]

Section **[~~11.~~13.]** Red Fox.

Red fox may be hunted in accordance with the statutes and regulations of the State of Delaware governing the hunting of red fox: from October 1 through **[~~the last day of~~]** April **[30 for chase only whereby it shall be unlawful to**

kill red fox], except **[~~that the season shall be closed during the entire period of the shotgun and/or muzzleloader seasons for deer~~ no red fox hunting shall be lawful during any period when it is lawful to hunt deer with a firearm]**. **[Notwithstanding the foregoing, red foxes may be killed in accordance with § 788 of Title 7 and Section 8 of WR-2.]**

Section **[~~4.~~14.]** Ruffed Grouse.

[~~There shall be no season during which ruffed grouse may be hunted, possessed, shipped or sold.~~ It shall be unlawful for any person to hunt for ruffed grouse during any period of the year.]

Section **[~~16.~~15.]** Snapping Turtles.

[(a) Season. –] It shall be unlawful for any person to hunt for snapping turtles during any period of the year, except between and including **[~~the fifteenth day of~~]** June **[15]** and **[~~the fifteenth day of~~]** May **[15]**.

[(b) Size. – ~~No person shall~~ It shall be unlawful for any person to] sell, offer for sale or kill any snapping turtle with a carapace length of less than eight inches, measured on the curvature.

Section **[~~14.~~16.]** Terrapin.

[(a) Season. –] It shall be unlawful for any person to hunt **[~~or fish~~]** for diamondback terrapin during any period of the year, except between and including **[~~the fifteenth day of~~]** July **[15]** and **[~~first day of~~]** October **[1]**.

[(b) Limit. –] ~~The daily limit shall be four.~~ It shall be unlawful for any person to take more than four diamondback terrapin in any one day.

[~~REGULATION WL14.~~ WR-5.] WILD TURKEYS.

Section 1. **[Possession of Wild Turkey Prohibited; Exceptions.]**

It shall be unlawful for any person, other than authorized representatives of the Division, to release or possess Meleagris gallopavo (wild turkey) in Delaware without a permit from the Division. The prohibition to possess and/or release Meleagris gallopavo shall include both birds taken from the wild and birds bred in captivity.

[Section 2. Instruction Requirement.]

It shall be unlawful **[for any person]** to obtain a **[~~valid~~]** turkey hunting permit **[~~until~~ from the Division before]** a person attends a Division approved course of instruction in turkey hunting.

[Section 3. Method of Take.]

[(a)] It shall be unlawful **[for any person]** to use any **[~~weapon~~ firearm]** to hunt wild turkeys, except a 10, 12, 16, or 20 gauge shotgun loaded with size 4, 5, or 6 shot or a longbow with a broadhead arrow, 7/8 inches in minimum width.

[(b)] It shall be unlawful **[for any person]** to use bait or dogs **[to hunt wild turkeys~~, and hunters may not "drive" turkeys or shoot them from their roost trees~~]**.

[(c) It shall be unlawful for any person to "drive" wild turkeys.]

[(d) It shall be unlawful for any person to shoot any wild turkey that is in a roost tree.]

[(e) ~~Wild turkey hunters must wear~~ It shall be unlawful for any person to hunt wild turkeys unless said person is wearing] camouflage clothing**[.]**

[(f) It shall be unlawful for any person to hunt wild turkeys if said person is wearing ~~and may not wear~~] any garment with the colors white, red, or blue.

[(g) ~~Hunters may~~ It shall be unlawful for any person to hunt wild turkeys and] use artificial turkey decoys of either sex that are **[~~not~~]** wholly or partially made from any part of a turkey that was formerly alive.

Section **[~~2.~~ 4.]**Season **[and Limit]**.

[(a)] The Division may establish a season for **[~~taking~~ hunting]** bearded wild turkeys by permit. The Division will determine the terms and conditions of the issuance of permits. It shall be unlawful **[for any person]** to hunt wild turkey, except as permitted by the written authorization of the Division.

[(b)] It shall be unlawful **[for any person]** to hunt **[wild]** turkeys, except from one-half hour before sunrise to 1:00 p.m.

[(c) ~~Hunters must~~ It shall be unlawful for any person to not] check **[~~any~~ a wild]** turkey **[~~taken~~]** at an authorized checking station by 2:30 p.m. on the day of kill.

[(d) ~~The season limit shall be one bearded turkey.~~ It shall be unlawful for any person to take or attempt to take more than one bearded wild turkey per season.]

[~~REGULATION WL21.~~ WR-6. ~~RESTRICTION ON RESTRICTED, EXPERIMENTAL PROPAGATING~~ RESTRICTED EXPERIMENTAL, PROPAGATING] AND SHOOTING PRESERVES.

It shall be unlawful **[for any person]** to hunt liberated game on restricted preserves from April **[~~1~~ 1st 1]** through October **[~~14th, inclusive, of any given calendar year~~ 14]**.

[~~REGULATION WL23~~ WR-7]. DEER.

Section 1. Limit.

[~~(1)~~(a) ~~No person shall, in any one fiscal year (July 1 - June 30), hunt or have in their possession more than two deer taken by all methods allowed by law as herein specified, except that only one may be a buck with one or more antlers of three inches in length or longer antlered.~~ Unless otherwise provided by law or regulation of the Department, it shall be unlawful for any person to:

(1) Kill or take or attempt to kill or take more than two deer in any license year;

(2) Kill or take two deer in any license year without at least one of the two deer being an antlerless deer; or

(3) Possess or transport any deer that was unlawfully killed.

~~(2) In addition to the two deer limit (one antlered buck) established by Part (1) of this subsection, other deer may be taken pursuant to the conditions established in Part 6 of this Subsection.~~

~~(3) The Division may issue additional permits to take deer during the open seasons, with permits costing ten dollars each, as specified in the terms distributed with the permits.~~]

[~~(4)~~(b)] For the purposes of this section **[~~only~~]**, a person "driving deer" and not in possession of any **[~~weapons~~ weapon or firearm]** shall not be treated as if they are hunting deer, provided they are assisting lawful hunters.

[~~(5)~~(c)] It shall be unlawful **[for any person]** to purchase, sell, expose for sale, transport or possess with the intent to sell, any deer or any part of such deer at any time, except that hides from deer lawfully killed and checked may be sold when tagged with a non-transferable tag issued by the Division. Said tag must remain attached to the hide until it leaves the State or is commercially processed into leather. **[~~The provisions of the proceeding two sentences do~~ This subsection shall]** not apply to venison approved for sale by the United States Department of Agriculture and imported into Delaware.

[~~(6)~~(d) Notwithstanding subsection (a) of this section, ~~the Division may issue additional permits to take deer, with permits costing ten dollars each, in accordance with the following provisions:~~ a person may purchase an Antlerless Deer Tag for $10 to kill or take an additional antlerless deer during the open season, provided:]

[~~(A)~~(1) ~~Permits are valid during any deer season~~ The tag is valid for the season in which it is used; and

~~(B) Deer taken under the bonus shall be checked at a State approved deer checking station;~~

~~(C) Permits are only valid for anterless deer (both antlers must be less than three inches);~~

~~(D)~~(2) ~~Permits are valid statewide~~ The tag is valid in the deer management zone from which the deer is taken].

[(e) Notwithstanding subsection (a) of this section, ~~except that each hunter~~ a person] may purchase one **[~~additional~~ Quality Buck]** Tag for **[~~ten dollars~~ $10]** to take a second antlered **[~~buck~~ deer]** with a minimum outside antler spread of fifteen inches**[, provided the tag is valid for the season in which it is used]**.

Section 2. Tagging and Designated Checking Stations.

(a) Attaching Tags. – **[~~It shall be unlawful for any person to hunt and kill a deer within this State and fail to attach an approved tag to said deer immediately upon killing of same.~~ Each licensed person who hunts and kills a deer shall, immediately after the killing and before removing the deer from the location of the killing, attach an approved tag to the deer. ~~The tag shall either be the deer tag detached from a Delaware hunting license, an Antlerless Deer Tag, a Quality Buck Tag or, for that person who is not required to have a hunting license in this State and does not have said license, a legible tag of substantial material stating their name, address and reason for not having a valid Delaware hunting license.~~ An approved tag shall mean an Anterless Deer Tag, Quality Buck Tag or a tag detached from a Delaware hunting license. Any unlicensed person not required to secure a license shall make and attach a tag to the deer that contains the person's name, address and reason for not having a valid Delaware hunting license.**

(b) Retention of Tag. – **[~~Tags~~ The tag required by subsection (a) of this section]** shall remain attached to the deer until **[the deer]** is **[~~legally checked in at~~ presented to]** an official checking station **[~~by an authorized agent of the Division~~ for examination and tagging,]** as **[~~described in~~ prescribed by ~~Subsection C of this section (Regulation 23)~~ subsection (c) of this section]**.

(c) Checking Stations. – **[~~Every person killing a deer within this State~~ Each person who hunts and kills a deer]** shall, within 24 hours of killing said deer, **[~~deliver~~ present]** the **[~~same~~ deer]** to a checking station designated by the Division **[or to an authorized employee of the Division. ~~Deer may also be delivered to an authorized employee (or agent) of the Division at other times to be checked.~~]**

(d) Dressing. – **[~~No person shall~~ It shall be unlawful for any person to]** remove from any deer any part thereof, except those internal organs known as the viscera, or cut the meat thereof into parts, until **[~~it~~ such deer]** has been examined by an authorized **[~~agent~~ employee]** of the

Division **[or a checking station]**, as **[~~provided in prescribed by Subsection C~~ subsection (c) of this section]**.

(e) Receipt Tag. – The Division shall issue, at a checking station or otherwise, an official receipt tag proving the deer was [**~~checked~~ examined**] by an authorized **[~~agent~~ employee of the Division or a checking station, as prescribed by subsection (c) of this section]**. **[~~Said~~ The]** receipt tag **[~~must always~~ shall]** remain with the deer **[~~carcass~~]** until **[~~the meat is prepared and stored in refrigeration for food as proof the deer was lawfully checked~~ such time as the deer is processed for consumption or prepared for mounting]**.

(f) **[~~Deer~~]** Hunting with Tags Detached from License. – **[~~No person may~~ It shall be unlawful for any person to]** hunt deer with any license that has the applicable deer tag detached **[~~(torn off)~~]** from the license, even though said tag may be in the possession of the hunter. **[~~Persons who have deer tags accidentally detached from their license~~ Any person with a detached deer tag]** may, upon application to the Division, have a **[~~new~~]** duplicate license issued in order to obtain a valid deer tag.

Section 3. Method of Take.

(a) Shotgun. – **[~~No person shall~~ It shall be unlawful for any person to]** hunt deer during the shotgun season using a shotgun of a caliber smaller than 20 gauge, **[~~or load said shotgun with missiles smaller than that commonly known as buckshot,~~]** or have in his **[or her]** possession any shell loaded with **[~~missiles~~ shot]** smaller than **[what is commonly known as]** "buckshot."

(b) Bow and Arrow. – **[~~No person, while hunting deer during the bow season, shall~~ It shall be unlawful for any person to hunt deer during the longbow season and]** have in **[~~their~~ his or her]** possession **[~~while engaged therein~~]** any **[~~weapons or firearms~~ weapon or firearm]** other than **[a knife,]** a bow and sharpened broadhead arrows having minimum arrowhead width of 7/8 of an inch**[~~, or a knife~~]**.

[(c)] Muzzle-loading Pistols. – A single shot muzzle-loading pistol of .42 caliber or larger using a minimum powder charge of 40 grains may be used to provide the coupe-de-grace on deer during the primitive **[~~weapon~~ firearm]** season.

[~~(c)~~(d)] Refuge in Water. – **[~~No person shall at any time~~ It shall be unlawful for any person to]** shoot, kill or wound or attempt to shoot, kill or wound any deer **[~~(buck or doe) while the same~~ that]** is taking refuge in or swimming through the waters of any stream, pond, **[~~or~~]** lake **[or]** tidal waters **[~~or their tributaries~~]**.

[~~(d)~~(e)] Dogs. – **[~~No person shall~~ It shall be unlawful for any person to]** make use of a dog for hunting during the shotgun or muzzleloader seasons for deer (in each county), except as permitted in the hunting of migratory waterfowl from an established blind or for hunting dove, quail**[, raccoon]** or rabbit on properties closed to deer hunting with firearms during December and January.

Section 4. Illegal Hunting Methods**[; Baiting]**.

[~~No person shall~~ It shall be unlawful for any person to] set, lay or use any trap, snare, net, or pitfall or make use of any artificial light, or other contrivance or device, for the purpose of hunting deer. This **[~~definition~~ subsection]** does not **[~~include~~ preclude]** the **[~~placement of minerals, grain, fruit or other nontoxic compounds that may be used~~ use of bait]** for **[the]** purpose of attracting deer in order to hunt them **[on private land]**.

Section 5. Seasons.

(a) Shotgun Seasons. – Deer may be hunted **[~~by~~ with]** shotgun in accordance with the statutes and regulations of the State of Delaware governing the hunting of deer: from the Friday in November that precedes Thanksgiving by thirteen (13) days through the second Saturday succeeding said Friday **[~~for a total of eight (8) hunting days~~]**; and from the Saturday that precedes the third Monday in January through the following Saturday in January **[~~for a total of seven (7) hunting days~~]**.

(b) Archery Seasons. – Deer may be hunted with longbow in accordance with statutes and regulations of the State of Delaware governing the hunting of deer: from September 1 (September 2, if September 1 is a Sunday) through the last day of January, provided **[~~that blaze~~ hunter]** orange **[~~shall be worn~~ is displayed in accordance with § 718 of Title 7 ~~at all times~~]** when it also lawful to hunt **[deer]** with **[~~any type of~~ a]** firearm **[~~in accordance with § 718 of Title 7~~]**.

(c) Muzzleloader Seasons. – Deer may be hunted with muzzle-loading rifles in accordance with the statutes and regulations of the State of Delaware governing the hunting of deer: from **[the]** Saturday that precedes the second Monday **[~~(Columbus Day observed)~~]** in October through the next Saturday **[~~(a seven (7) day season)~~]**; and from the Monday that follows the close of the January shotgun season through the next Saturday **[~~(a six (6) day season)~~]**.

(d) Special Antlerless Season. – **[~~Only~~]** Antlerless deer may be hunted with shotgun in accordance with the statutes and regulations of the State of Delaware **[governing the hunting of deer]**: from the second Saturday **[in December]** through the third Saturday in December **[~~(a seven (7) day season)~~]**.

(e) Crossbow Seasons. – Crossbows may be used in

lieu of shotguns during that part of the November shotgun season that runs from Monday through Saturday of each year and in any shotgun or muzzleloader deer season open in December or January.

(f) Special Shotgun Season for Young and **[~~Non-ambulatory~~ Disabled]** Hunters. – Deer may be hunted on the first Saturday of November by **[~~non-ambulatory (wheelchair confined) hunters~~ disabled (non-ambulatory) hunters using a wheelchair for mobility]**, and hunters ~~twelve~~ 12 years of age or older but less than **[~~sixteen~~]** 16 years of age (12 to 15 inclusive) who have completed an approved course in hunter training. Young hunters must be accompanied by a licensed non-hunting adult who is **[~~twenty-one~~ 21]** years of age or older. Young hunters must be of sufficient size, physical strength and emotional maturity to safely handle a shotgun.

[~~REGULATION WL25.~~ WR-8.] GENERAL RULES AND REGULATIONS GOVERNING LAND AND WATERS ADMINISTERED BY THE DIVISION.

Section 1. Motorized Vehicles.

(a) General. – It shall be unlawful for any person to **[~~enter upon~~ drive or operate a motorized vehicle upon any ~~the~~]** lands **[~~or waters~~]** administered by the Division **[~~with any wheeled or tracked vehicles~~]**, except on established roads or as otherwise **[~~permitted~~ authorized]** by the **[~~Division~~ Director]**.

(b) Noise. – It shall be unlawful **[for any person]** to **[~~trespass or enter upon~~ drive or operate a motorized vehicle upon]** any lands **[~~or waters~~]** administered by the Division, **[~~with any motor vehicle that causes~~ unless such vehicle is equipped with a muffler in good working order and in constant operation to prevent]** excessive or unusual noise **[~~or with any vehicle that does not have a muffler or any vehicle that has a defective or modified muffler which allows unusual or excessive noise~~]**.

(c) Speed Limit. – It shall be unlawful for any person to drive **[or operate]** a **[~~motor~~ motorized]** vehicle in excess of twenty (20) miles per hour when on lands administered by the Division, unless otherwise authorized by the Director.

(d) **[*~~Non-licensed~~ Unlicensed*]** Vehicles. – It shall be unlawful for any person to **[~~enter~~ drive or operate any motorized vehicle]** upon **[~~the~~ any]** lands **[~~or waters~~]** administered by the Division **[~~with any motor driven vehicle that does not bear a valid license number and have a valid registration recognized by the State of Delaware~~, unless said vehicle is licensed for use upon public highways and roadways or the driver or operator of said vehicle has been issued~~. The operation of minibikes, gocarts, snowmobiles and all terrain vehicles is expressly forbidden, except with~~]** a permit from the Division.

(e) Parking.

(1) It shall be unlawful for any person to park any vehicle on **[~~Division~~]** lands **[administered by the Division]** in such a manner as to obstruct the use of a boat ramp, roadway or trail. Any vehicle parked in such **[~~a way~~ manner ~~as to obstruct a boat ramp, road or trail will~~ shall]** be subject to removal, **[~~with~~ and]** the owner of said vehicle **[~~bearing~~ shall bear]** all costs involved **[~~in~~ with]** such removal.

(2) Unless otherwise authorized by the Director, it **[~~is~~ shall be]** unlawful for any person to park and leave unattended any vehicle or trailer in **[any]** Division parking **[~~lots~~ lot]**, unless said **[~~person is lawfully using Division parking and/or ramp facilities~~ lot is lawfully being used]** for direct access to lands or waters administered by the Division.

[(3) Unless otherwise authorized by the Director, it shall be unlawful for any person to leave any vehicle on lands administered by the Division for a period exceeding 24 hours.]

Section 2. Conditions of Use.

(a) Trespass. – It shall be unlawful for any person to **[~~trespass~~ enter]** upon lands or waters administered by the Division when those lands or waters have been closed by the Division **[~~for any of the following reasons: (1)~~ to: protect public]** safety; **[~~(2) protection of~~ protect]** Department property; **[~~(3) when deemed necessary for the management of~~ or manage]** wildlife.

(b) Hours of Entry. – It shall be unlawful for any person to be present upon lands or waters administered by the Division between sunset and sunrise, unless such person is lawfully hunting or fishing or has been authorized by written permission of the Director.

(c) Camping. – It shall be unlawful for any person to camp on **[~~areas~~ lands]** administered by the Division, except conservation oriented groups may, with written permission of the Director, camp **[~~on lands~~ in areas]** specified in such permit.

(d) Swimming. – It shall be unlawful for any person to swim in **[~~areas~~ waters]** administered by the Division, except by written permission of the Director.

(e) Dumping.

(1) It shall be unlawful for any person to **[~~throw, dump, dispose of or otherwise place any trash, refuse or similar material in or on lands or waters administered by the Division~~ place, dump, deposit, throw or leave any**

garbage, refuse or similar debris within or upon any lands or waters administered by the Division, except in receptacles provided for such purpose];

(2) It shall be unlawful for any person to **[~~place residential, commercial or household garbage, trash or similar material in Division trash receptacles or containers~~ bring any trash, refuse or similar material onto lands administered by the Division for the purpose of disposing such in Division receptacles]**.

(3) Unless otherwise authorized by the Director, it **[~~is~~ shall be]** unlawful **[for any person]** to deposit any material, structure, debris or other objects on lands **[~~and/or~~ or]** waters administered by the Division.

(f) Destruction of State Property.

(1) It shall be unlawful for any person to **[~~destroy, mutilate, deface, injure, or remove any part thereof, of any Division property, equipment, furniture, fixtures, buildings, monuments, markers, tables, signs, plaques, vehicles or boats~~ deface, damage, remove or alter any structures, buildings, natural-land features, or other property or equipment belonging to the Division]**.

(2) **[~~It shall be unlawful for any person in any manner to cut down, destroy, break, dig, take or carry away without lawful authority or consent, any shrub, tree, bush, vine or plant being or growing on any State-owned property.~~ Unless authorized by the Division for management, research or educational purposes, it shall be unlawful for any person to cut, injure or remove trees, shrubs, wildflowers, ferns, mosses or other plants from lands administered by the Division.]**

(3) It shall be unlawful **[for any person]** to erect or use any portable or permanent deer stand that involves the use of nails or screws placed in a tree.

[(4) Unless otherwise authorized by the Director, it shall be unlawful for any person to kindle, build, maintain or use a fire on lands administered by the Division.]

Section 3. Hunting**[, and]** Firearms**[~~, and Dogs~~]**.

(a) Hunting.

(1) It shall be unlawful **[for any person]** to hunt on **[~~areas~~ lands]** administered by the Division, except as permitted by the Director in writing and specified on **[current wildlife area]** maps distributed by the Division.

(2) A daily permit must be **[~~lawfully~~]** obtained before hunting waterfowl at Augustine, Cedar Swamp, Little Creek, Woodland Beach, Ted Harvey, Prime Hook and Assawoman wildlife areas. Permits may be obtained **[~~on the area~~ on-site]** from an authorized agent of the Division and must be returned upon leaving the area **[~~for which the permit is issued~~]**. The Director may specify the hours of a permit's effectiveness and determine the conditions of its issuance.

(b) Waterfowl.

(1) It shall be unlawful **[for any person]** to hunt waterfowl on areas administered by the Division, except from State built blinds, or other blinds authorized by the Division, or by written permission of the Director.

(2) It shall be unlawful **[for any person]** to enter tidal and/or impounded areas administered by the Division during the waterfowl season, except for access as authorized by paragraph (1) of this subsection.

(c) Trapping. – It shall be unlawful **[for any person]** to trap or attempt to trap on areas administered by the Division, except for: **[~~those~~]** persons holding a valid contract with the Division to do so; **[(~~or except~~]** authorized agents of the Division who are conducting authorized wildlife management practices; or **[~~except for~~]** scientific purposes as specifically authorized in writing by the Director.

(d) Firearms on Division Areas.

(1) It shall be unlawful for any **[~~individual~~ person]** to possess a firearm **[~~or have a firearm on his person~~]** on lands **[or waters]** administered by the Division **[~~between~~ from]** March 1 **[~~and~~ through]** August 31 **[~~(inclusive)~~]**, except as authorized by the Director in writing.

(2) It shall be unlawful for **[~~anyone~~ any person]** to possess a rifled firearm of any description at any time on those lands bordering the Chesapeake and Delaware Canal **[and]** licensed to the Department by the Government of the United States for wildlife management purposes, except muzzleloaders during the primitive **[~~weapon~~ firearm]** season.

(3) It shall be unlawful **[for any person]** to discharge any firearm on lands or waters administered by the Division on Sunday, except in areas designated by the Director or with a permit from the Director.

(4) It shall be unlawful **[for any person]** to discharge any firearm on lands or waters administered by the Division **[~~to target shoot or to use a firearm~~]** for any purpose**[, including target shooting,]** other than to **[~~pursue or attempt to take lawful game species~~ hunt]** during an open season, under conditions approved by the Director **[~~on~~ and specified on the ~~a~~ current wildlife area map ~~of the area~~]**.

(e) Dikes. – It shall be unlawful **[for any person]** to be in possession of any firearm on any dike administered by the Division **[~~at any time~~]**, unless such person is temporarily crossing a dike at a ninety degree angle.

(f) Deer Hunting By Driving. – It shall be unlawful for residents to participate in deer drives, except where

authorized on **[current wildlife]** area maps between the hours of 9:00 a.m. and 3:00 p.m. No more than six (6) resident hunters may participate in driving deer at any one time. Nonresidents may not participate in deer drives at any time. Nonresidents are restricted to hunting deer from stationary locations. Nonresidents may not possess a loaded firearm during the deer season, except to hunt from a stationary location or to retrieve a deer that they wound.

Section 4. Horses and Bicycles.

It shall be unlawful to ride horses or bicycles on, or allow horses to use, any **[~~Division~~]** lands **[or waters administered by the Division,]** except on established roads **[~~normally open to vehicular traffic and areas~~ or trails that have been]** designated by the Division **[for such purposes on current wildlife area maps]**.

Section 5. Concessions, Posters and Solicitations.

[(a) ~~No person shall~~ It shall be unlawful for any person to] erect, post or distribute any placard, sign, notice, poster, billboard or handbill **[~~within~~ on]** lands or waters administered by the Division without written authorization of the Director.

[(b) It shall be unlawful for any person to engage in the] vending of merchandise, food or services **[~~within~~ on]** lands or waters administered by the Division **[~~is prohibited~~]** without written authorization of the Director.

[(c)] It shall be unlawful for any person to do any form of solicitation for money or goods on any lands **[or waters]** administered by the Division without written authorization of the Director.

Section 6. Firewood.

[~~A written permit shall be required~~ It shall be unlawful] for any person to remove firewood from **[~~Division~~]** lands **[administered by the Division without a permit from the Division]**, except when special firewood areas are designated by the **[~~Division~~]** Director in writing.

Section 7. Dog Training.

(a) General. – It shall be unlawful **[for any person]** to train **[~~dogs~~ a dog]** on lands or waters **[~~owned or~~]** administered by the Division, except:

(1) During open hunting seasons for the game that the dog is being trained to hunt; **[~~except~~]**;

(2) **[~~On designated~~ Within a]** dog training **[~~areas~~ area established by the Division;]** and **[~~except~~]**

(3) As permitted by the Director in writing on **[current wildlife]** area maps.

(b) C&D Canal Summit Area. – It shall be unlawful **[for any person]** to enter the dog training area west of the Summit Bridge (Rt. 896), designated on **[~~an~~ the current wildlife]** area map of the C&D Canal Wildlife Area, for any purpose other than to train dogs or hunt for deer during the shotgun deer seasons. It shall be unlawful **[for any person]** to fish, operate a model or full size boat, ride horses or bicycles, or conduct any other activity on the area.

[~~REGULATION WL27.~~ WR-9.] WILDLIFE THEFT PREVENTION FUND.

[~~The Division will pay up to $1000.00 for information leading to the arrest and conviction of any person found guilty of: Class 1 – Rewards of $100.00 to $1000.00 – (1) Commercialization of wildlife; (2) Killing of an endangered/threatened species; Class 2 – Rewards of $100.00 to $500.00 – (1) Illegally hunting black ducks, canvasbacks, turkeys, or Canada geese; (2) Poisoning of wildlife; (3) Gross over limits of wildlife; (4) Illegally hunting waterfowl or deer on State game refuges; (5) Illegally hunting/trapping out of season or at night; (6) Hunting during license revocation; (7) Possessing, tending or setting killer traps with a jaw spread in excess of 5 inches; Class 3 – Rewards up to $100.00 – (1) Illegally taking or wounding wildlife with a rifle. The confidentiality of informants and their payments will be maintained by administrative procedures. Department employees, peace officers and their immediate family members are not eligible for rewards.~~

Section 1. Schedule of Rewards.

(a) The Division shall pay up to $1000 for information leading to the arrest and conviction of any person found guilty of:

(1) Commercialization of wildlife; or

(2) Killing an endangered species or a species classified as a threatened species in accordance with the Endangered Species Act of 1973, as amended.

(b) The Division shall pay up to $500 for information leading to the arrest and conviction of any person found guilty of:

(1) Illegally hunting black ducks, canvasbacks, Canada geese or turkeys;

(2) Poisoning wildlife;

(3) Gross over-limits of wildlife;

(4) Illegally hunting waterfowl or deer on State game refuges;

(5) Hunting or trapping out of season;

(6) Illegally hunting at night;

(7) Hunting during license revocation; or

(8) Possessing, tending or setting killer traps

with a jaw spread in excess of 5 inches.

(c) The Division shall pay up to $100 for information leading to the arrest and conviction of any person found guilty of illegally taking or wounding wildlife with a rifle.

(d) The confidentiality of informants and their payments shall be maintained by administrative procedures. Peace officers, Department employees or members of their immediate families are not eligible for rewards.]

[~~REGULATION WL29.~~ WR-10.] NUISANCE GAME ANIMALS.

Section 1. **[Incorporated Cities or Towns.]**

Within the limits of residential or commercial areas of incorporated cities or towns, or within residential or commercial structures, the following game animals may be controlled (killed) without a permit when they are causing damage: gray squirrel, raccoon **[and]** opossum. Methods used to control said animals must be consistent with **[~~provisions of Title 7 of the Delaware Code~~ the laws of this State and the regulations of the Department]** and only live traps may be used (without a depredation permit) outside of established trapping seasons.

Section 2. **[Pest Control Operators.]**

The Division may designate licensed pest control operators as cooperators to control nuisance wild animals. Said cooperators must agree to follow guidelines for control as determined by the Division and notify potential clients of their fees.

[~~REGULATION WL31.~~ WR-11.] SHORELINE REFUGES OF THE DELAWARE RIVER AND BAY.

Section 1. **[State Wildlife Area Protection for Intertidal Areas.]**

Any land located between the high tide line and the low tide line, **[between the Smyrna River and the St. Jones River and]** adjoining the Delaware River and Bay **[~~in the areas listed herein~~]**, **[~~shall be a~~ is hereby designated a]** State wildlife area and subject to the rules **[and regulations]** pertaining thereto**[~~: from the Smyrna River south to the St. Jones River. This section regulation will only be operative on areas when~~, provided the]** adjoining landowners to said lands agree to their designation **[~~as a State wildlife area~~]** and agree to co-sign complaints concerning violations.

Section 2. Exemptions.

[~~This regulation shall not pertain to beach communities containing three or more cottages:~~] Woodland Beach, Pickering Beach, **[~~or~~ and]** Kitts Hummock **[shall be exempt from this regulation]**. This regulation shall not **[~~pertain to legally licensed~~ affect**] surf fishing vehicles **[~~where regulations permit the use of surf fishing~~ in areas where such]** vehicles **[are permitted]** or **[~~to~~]** other uses **[of intertidal areas authorized]** by **[~~special~~]** permit **from the Division]**.

[~~REGULATION WL32.~~ WR-12.] WATERFOWL REFUGE.

It shall be unlawful **[for any person]** to hunt waterfowl in that part of Drawer Creek west of U.S. Route 13 to where the tributaries of the creek meet routes 428 and 429.

[~~REGULATION WL33.~~ WR-13.] WILDLIFE REHABILITATION PERMITS.

[Section 1. Permit from Division; Exemption.]

[(a)] It shall be unlawful for any person to hold wildlife in captivity for the purpose of rehabilitation without a permit from the Division and any other permits required by the U.S. Fish and Wildlife Service. **[~~The Division may require applicants to apply on standardized forms.~~]**

[(b)] Licensed veterinarians are exempt from the **[~~licensing~~ permitting]** requirements of this **[~~section~~ regulation]** when rendering temporary treatment to injured wildlife and **[~~they make~~]** provisions **[are made]** to return any injured animals to the wild.

[Section 2. Training, Housing and Veterinary Care; Inspections.]

[(a) ~~Licensees~~ Permit holders] must conform to the training, housing and veterinary care standards of the National Wildlife Rehabilitators Association. Animals held under rehabilitation permits must be released to the wild or euthanized, if release is not feasible**[, unless the Division under § 555 of Title 7 authorizes possession for scientific or propagating purposes]**.

[(b)] Rehabilitation facilities must be available for inspection by Division employees during normal **[~~working~~ business]** hours **[~~of the State~~]**. **[Normal business hours shall mean Monday through Friday, except those days designated as holidays, during the hours in which the staff of the Division is scheduled to work.]**

[~~REGULATION 35.~~ WR-14.] FALCONRY.

Section 1. Federal Regulations Adopted.

It shall be unlawful for any person to practice the sport of falconry, except in such a manner as prescribed by regulations promulgated under provisions of 50 CFR (Code of Federal Regulations) §§ 21.28, 21.29 and 21.30. Such regulations are hereby made part of the regulations of the Department as prescribed in § 725 of Title 7. **[~~Provided, however, that parts of those regulations shall not apply if the Department prescribes further restrictions governing falconry.~~ Notwithstanding the foregoing, the federal regulations governing falconry shall be superseded by more stringent restrictions prescribed by law or regulation of the Department.]**

Section 2. Permits.

(a) Residents wishing to practice falconry shall apply to the Division **[for a falconry permit. To be issued a falconry permit, the person shall]** successfully pass a written test and have their facilities and equipment inspected as prescribed **[~~in 50 CFR, prior to a falconry permit being issued~~ by the federal regulations]**.

(b) Nonresidents wishing to **[~~hunt by~~ practice]** falconry **[~~in Delaware must hold a valid state/federal falconry permit from their home state and abide by any restrictions applicable to resident falconers~~ shall apply to the Division for a falconry permit. To be issued a falconry permit, the person must purchase a nonresident hunting license and be properly permitted to practice falconry in the state in which he or she resides]**.

(c) **[Falconry]** permits shall be effective, unless revoked, for a period of up to three years and coincide with the **[~~State fiscal year~~ license period for the hunting license]**. The Division shall participate in any joint state/ federal permit system available.

(d) The issuance of Apprentice Class permits shall be limited to **[~~person~~ persons]** 15 years of age or older.

Section 3. Taking of Raptors.

[(a)] It shall be unlawful **[for any person]** to take any birds of prey from the wild without a permit from the Division. The Director **[~~will~~ shall]** establish a limit on the number of raptors which may **[be]** taken each year and **[~~report this limit annually to~~ appear before the ~~Advisory~~ Council on Game and Fish to receive input on such limit before its adoption~~, that will provide a public forum to consider the decision~~]**.

[(b)] In 1999, the Division [~~will~~ **shall]** consider the issuance of no more than twelve (12) permits for taking birds of prey from the wild in Delaware, **[~~including~~ except that permits for]** no more than three (3) nestling red-tailed hawks or great horned owls **[shall be issued]**. **[~~Delaware falconers will have the first opportunity to apply for permits to remove nestlings during the period January 1 to February 28.~~]** Nonresident falconers may apply for available permits to take **[~~nestlings~~ nestling raptors ~~starting on March 1~~]**, **[~~providing their home state~~ provided the state in which the nonresident resides]** allows Delaware residents the reciprocal opportunity to remove nestling raptors.

[(c)] The taking of nestling (eyas) birds shall be limited to red-tailed hawks and great horned owls **[on Thursdays, Fridays and Saturdays ~~during the period~~ from ~~March 1~~ March 18 ~~to~~ through ~~June 15~~ June 30]**.

[(d)]The season for the taking of passage birds shall be from September 1 **[~~to~~ through]** January 12. **[~~Resident falconers shall have the first opportunity to obtain permits during the period from January 1 to September 30 to capture passage raptors. Starting on October 1 of each year, nonresident falconers may apply to obtain any available permits to take passage raptors in Delaware,~~ Nonresident falconers may apply to obtain any available permits to take passage raptors in Delaware]**, **[~~providing their home state~~ provided the state in which the nonresident resides]** has a reciprocal arrangement that permits Delaware residents to take passage raptors.

[(e)] It shall be unlawful to remove raptors from private property without the express consent of the landowner. It shall also be unlawful **[for any person]** to remove raptors from State parks, State forests, State wildlife areas, State owned wetland mitigation sites, national wildlife refuges, nature preserves, natural areas, and county or local parks without the advance approval of the agency administering the property. The permit to remove a raptor from the wild must be in possession of the falconer when attempting to capture a raptor. Apprentice falconers must be under the direct supervision of their sponsor **[or a Master or General class falconer]** when removing raptors from the wild.

[(f)] Raptors taken from the wild in Delaware may not be sold or bartered.

Section 4. Hunting.

Falconry **[~~is~~ shall be]** a legal method of take for all game birds and **[game]** animals in Delaware. The hunting season for resident game **[~~species with falconry~~]** shall be from September 1 **[~~of each year to~~]** through February 28 **[~~of each year~~]**. A **[~~permittee~~ permit holder]** whose raptor accidentally kills wildlife **[~~that is not during an open~~ during a closed]** season **[for such wildlife]** shall leave the

dead wildlife where it lies, except the raptor may feed upon the wildlife before leaving the site of the kill, provided that the wildlife shall not be reduced to possession by the falconer and the falconer shall cease hunting with the raptor that makes the accidental kill for the remainder of the day. **[~~It shall be unlawful to hunt under a falconry permit unless the falconer has specific permission of the landowner to hunt.~~]**

Section 5. Marking.

Any raptor possessed under a Delaware falconry permit must be banded with a permanent, non-reusable numbered band issued by the U.S. Fish and Wildlife Service or the Division. Captive reared raptors may be marked with either a permanent, non-reusable numbered band or, if sold, a numbered seamless band. Markers shall be removed from birds **[~~which~~ that]** die or are intentionally released into the wild and must be forwarded to the Division within ten days along with a report that documents the fate of the bird.

Section 6. Release.

[~~No hybrid or~~] Raptors**[, including hybrid raptors, ~~that~~ which]** are not indigenous to Delaware **[~~may~~ shall not]** be permanently released into the wild**. [Raptors released in Delaware must be released within the appropriate season in which that species naturally occurs within the State.]**

[~~REGULATION 37~~ WR-15.] COLLECTION OR SALE OF NONGAME WILDLIFE.

Section 1. Commercial Collection.

It shall be unlawful **[for any person]** to collect or possess **[~~and~~ any]** North American nongame wildlife species or any part thereof for commercial purposes without a permit from the Director. The permit **[~~will~~ shall]** limit the terms and conditions for collecting or possessing said wildlife within the State. **[~~Federally or state listed threatened and~~ Endangered species or a species classified as a threatened species in accordance with the Endangered Species Act of 1973, as amended]** may not be collected, possessed or sold without appropriate federal/state permits. **[Species that are exotic to Delaware and regulated by the Delaware Department of Agriculture shall be exempt from the provisions of this section.]**

Section 2. Collection and Possession **[of Reptiles and Amphibians]**.

[(a) Unless otherwise provided by law or regulation of the Department,] it shall be unlawful for any person to remove from the wild or possess **[~~for non-commercial purposes, any nongame wildlife species~~ any reptile or amphibian]**, their eggs or parts without a permit from the Director.

[(b)] For noncommercial purposes, one individual of any single species of [**~~nongame wildlife~~ reptile or amphibian]**, other than State Heritage Program ranked S1, S2, **[S3,]** SX or SH **[~~or federally protected migratory birds~~]**, may be collected and possessed without a permit. **[~~A permit will not be required for school activities that are part of an approved curriculum or for projects approved by nationally chartered youth groups such as 4-H, Boy Scouts of America or Girl Scouts of America.~~]**

[(c)] Federally listed threatened and endangered species may not be collected or possessed without federal permits.

[(d)] It shall be unlawful to remove **[~~nongame animals~~ reptiles or amphibians]** from the wild and later release said animals back to the wild **[if they have been held in captivity for 30 days more]**.

Section 3. Captive Breeding.

[(a)] It shall be unlawful **[for any person]** to breed in captivity any North American nongame wildlife species without a nongame breeders permit from the Director, except for species that are regulated by the Delaware Department of Agriculture. Said permit **[~~will~~ shall]** limit the terms and conditions for captive breeding of said wildlife.

[(b) It shall be unlawful for any person to release] captive-bred species **[~~cannot be released~~]** into the wild. A signed bill of sale shall accompany any captive-bred species that are sold. Federally listed threatened and endangered species may not be collected or possessed **[~~with~~ without]** the appropriate federal permits.

[(c)] This section shall not apply to **[accredited zoos or to]** raptors regulated by federal and State falconry or **[raptor propagation]** regulations.

Section 4. **[~~Pre-Act~~]** Collections **[Prior to Adoption of Regulations]**.

Persons owning nongame wildlife that was in their possession prior to the **[~~date of the~~]** effective date of this regulation shall have **[~~six~~ four]** months to register said wildlife with the Division. Once registered, said wildlife may be legally possessed.

Section 5. Sale or Possession of CITES Listed Species.

It shall be unlawful **[for any person]** to sell or possess bear gall bladder, or other viscera from any species of bear, or any part of other species listed as prohibited by the Convention on **[International]** Trade in Endangered Species (CITES). The possession of any part of a bear must be in

conformance with CITES.

[NON-TIDAL] FISHING [REGULATIONS]

[~~REGULATION FF3~~. NT-1. SPECIAL] PERMITS.

The Director may issue a permit authorizing the holder thereof to fish by means of nets or other device from any of the non-tidal waters of this State**[~~. Such permits will be issued for fisheries research and management purposes only~~, provided the fishing serves a research, management or educational purpose]**.

[~~REGULATION FF5.~~ NT-2.] BAG **[~~LIMIT~~ LIMITS]** AND SEASONS.

Section 1. Closed Seasons.

[Unless otherwise prescribed by law or regulation of the Department,] there shall be no closed season, size limits or possession limits on any species of fish taken by hook and line in any non-tidal waters of this State**[~~, except as prescribed by this regulation, or otherwise by statute~~]**.

Section 2. Bass.

(a) Statewide limits.

(1) It shall be unlawful for any person to have in possession at or between the place where taken and his or her personal abode or temporary place of lodging more than six (6) largemouth and/or smallmouth bass.

(2) Unless otherwise authorized in this regulation, it shall be unlawful for any person to possess any largemouth or smallmouth bass less than twelve (12) inches in total length. Any bass taken which is less than the **[twelve]** (12) inches shall be returned to the water as quickly as possible with the least possible injury.

(b) Becks Pond.

(1) Notwithstanding **[~~the provisions of Subsection A, Section 2~~ paragraph (a)(1)]** of this **[~~regulation~~ section]**, it shall be unlawful for any person to have in possession while fishing on Becks Pond**[~~, New Castle County,~~]** more than two (2) largemouth and/or smallmouth bass.

(2) Notwithstanding **[~~the provisions of Subsection A, Section 2~~ paragraph (a)(2)]** of this **[~~regulation~~ section]**, it shall be unlawful for any person to have in possession while fishing on Becks Pond**[~~, New Castle County,~~]** any largemouth or smallmouth bass less than fifteen (15) inches in total length. Any largemouth or smallmouth bass less than fifteen (15) inches in total length shall be immediately returned to Becks Pond with the least possible injury.

(c) Andrews Lake.

[~~(b)~~(1)] Notwithstanding **[~~the provisions of Subsection A, Section 2~~ paragraph (a)(1)]** of this **[~~regulation~~ section]**, it shall be unlawful for any person to have in possession while fishing on Andrews Lake more than one (1) largemouth bass of the six (6) allowed in possession to be larger than fifteen (15) inches in total length. Bass measuring less than twelve (12) inches may be taken and possessed within the six (6) allowed in possession while fishing on Andrews Lake.

[~~(a)~~(2)] Notwithstanding **[~~the provisions of Subsection A, Section 2~~ paragraph (a)(2)]** of this **[~~regulation~~ section]**, it shall be unlawful for any person to have in possession while fishing on Andrews Lake any largemouth bass measuring from twelve (12) inches to and including fifteen (15) inches in total length.

(d) Derby **[Pond]** and Hearns Pond.

(1) Notwithstanding **[~~the provisions of Subsection A, Section 2~~ subsection (a)]** of this **[~~regulation~~ section]**, it shall be unlawful for any person to have in possession while fishing on Derby Pond or Hearns Pond more than one (1) largemouth bass of the six (6) allowed in possession to be larger than eighteen (18) inches. Bass measuring less than fifteen (15) inches may be taken and retained up to the legal possession limit while fishing on Derby Pond or Hearns Pond.

(2) Notwithstanding the provisions of **[~~Subsection A, Section 2~~ paragraph (a)(2)]** of this **[~~regulation~~ section]**, it shall be unlawful for any person to have in possession while fishing on Derby Pond or Hearns Pond any largemouth bass measuring from fifteen (15) inches to and including eighteen (18) inches **[in]** total length.

Section 3. Trout.

(a) Season. – It shall be unlawful for any person to fish for rainbow, brown and/or brook trout in designated trout streams **[~~during any period of the year~~]**, except between and including the first Saturday of April and the second Saturday of March **[of]** each succeeding year.

(b) Hours of Fishing. – It shall be unlawful for any person to fish for rainbow, brown and/or brook trout in designated trout streams on the opening day of the trout season before 7:30 a.m. and thereafter for the remainder of the trout season between one-half hour after sunset and one-half hour before sunrise.

(c) Possession. – [**~~No~~ It shall be unlawful for any**] person **[~~shall~~ to]** catch and/or have in **[~~their~~ his or her]** possession in any one day during the prescribed open season more than six (6) rainbow, brown and/or brook trout. On any day after a person takes **[~~and possess their~~ his or her]** legal

limit of trout, said person **[~~is~~ shall be]** prohibited from fishing in a designated trout stream on the same day, unless otherwise authorized by law or **[this]** regulation.

(d) Trout Stamp. – It shall be unlawful for any person to fish in a designated trout stream on or before the first Saturday in April and June 30, of the same year, and on or before the first Saturday in October and November 30, of the same year, unless said person has in his **[or her]** possession a valid trout stamp, or, unless said person is exempted by law from having a trout stamp.

(e) Restricted Trout Stream.

(1) **[~~There may not be~~ It shall be unlawful for any person to fish in a restricted trout stream with]** more than two flies on a line at any one time. **[~~All other kinds or methods of fishing are prohibited on any restricted trout stream.~~]**

(2) It shall be unlawful for any person to use any metallic, wooden, plastic or rubber spinners, spoons, lures, plugs and/or natural bait **[~~is forbidden~~]** on any restricted trout stream.

(3) It shall be unlawful for any person to have in his **[or her]** possession more than four (4) trout within 50 feet of any restricted trout stream. On the restricted trout stream only, trout may be caught and released as long as the four (4) trout possession limit is not exceeded. All trout released must be returned to the water as quickly as possible with the least possible injury.

(f) Closure of Trout Stream. – It shall be unlawful for any person to fish in **[a]** designated trout **[~~streams~~ stream]** within two weeks (14 days) of a scheduled opening of the trout season.

Section 4. Striped Bass (hybrids).

It shall be unlawful for any person to have in his **[or her]** possession while fishing in the non-tidal waters of this State more than two (2) striped bass (Morone saxatilis) and/or striped bass hybrids (Morone saxatilis crysops) or any striped bass or striped bass hybrid under the length of fifteen (15) inches measured from the tip of the snout to the tip of the tail.

Section 5. Panfish Limits.

It shall be unlawful for any person to have in possession while fishing in any State-owned non-tidal water more than fifty (50) panfish in aggregate to include bluegill, pumpkinseed, **[redear sunfish,]** black crappie, white crappie, white perch or yellow perch, provided no more than twenty-five (25) of the fifty (50) allowed in possession are of any one species.

[~~REGULATION FF6.~~ NT-3.] CLOSURE OF **[DEPARTMENT]** PONDS DURING DRAWDOWNS.

It shall be unlawful for any person to fish in any pond or lake **[~~owned~~ administered]** by the Department when the water level in said pond or lake is lowered for the purpose of aiding in the control of aquatic vegetation, the conservation of fishes or the repair of water control facilities, provided said pond or lake is duly posted with signs by the Division that **[~~states~~ state]** said pond or lake is closed to fishing.

[~~REGULATION FF7.~~ NT-4.] METHOD OF TAKE.

Section 1. Non-tidal Waters.

It shall be unlawful for any person to take fish from the non-tidal waters of this State, except by means of hook and line while under the immediate observation of the person using **[~~it~~ same]**. Carp and shad may be taken as set forth otherwise in this regulation.

[~~Section 3.Tumblcholes (Spillway pools).~~

~~It shall be unlawful to fish, by use of any seine or net, except minnow traps with maximum dimensions of 2' x 1' x 1' or nets not larger than six feet square, within any tumblehole and/or within 100 yards below a spillway of any lake, pond or impounded marsh within the State of Delaware. Carp may be taken by seine or net by special permit from the Director and under the supervision of a representative of the Division.~~]

Section **[~~4.~~2.]** Carp.

It shall be unlawful **[for any person]** to take carp, except by the following methods: hook and line; bow and arrow; **[and]** spear. Carp may be taken **[~~by~~ with a]** seine **[~~or net~~]** from freshwater ponds and non-tidal streams with **[~~special~~]** permission from the Director and under the supervision of a representative of the Division.

Section **[~~5.~~3.]** Shad.

Except as otherwise provided by law, it shall be unlawful **[for any person]** to take shad, except by hook and line, **[provided]** said line **[~~is to have~~ has]** no more than two (2) lures attached. Each lure may have no more than one (1) single pointed hook.

Section **[~~6.~~4.]** Snagging of Game Fish.

It shall be **[~~illegal~~ unlawful]** for any person to fish in the non-tidal waters of this State with hooks (single, double or treble) knowingly used to snag or otherwise catch or attempt to snag or otherwise catch any game fish by hooking said game fish in any part of the anatomy other than in the mouth.

[Section 5. Fish Ladders.

It shall be unlawful for any person to fish within ten (10) feet of an entrance or exit of a fish ladder or to remove fish from any fish ladder between March 15 and May 30.]

[~~REGULATION FF8.~~ NT-5.] ICE FISHING.

Section 1. **[Restrictions.]**

(a) It shall be unlawful for any person to fish more than five (5) hook and lines in non-tidal water through ice**[~~, provided the number of hooks on any one line does not exceed three~~]**.

(b) It shall be unlawful for any person to leave any hook and line being fished through the ice unattended.

[(c) It shall be unlawful for any person to fish in non-tidal water through ice with any line having more than three hooks.]

[~~REGULATION FF9.~~ NT-6.] SPEED AND WAKE OF MOTORBOATS ON DIVISION PONDS.

It shall be unlawful for any person to operate a motorized vessel, except at a slow-no-wake speed, on any pond or lake **[~~owned, leased or licensed~~ administered]** by the Division.

[~~REGULATION FF10.~~ NT-7.] FISH STOCKING PRACTICES.

Section 1.Stocking Fish Practices.

It shall be unlawful for any person to stock any species of fish into the non-tidal public waters **[~~in Delaware~~ of this State]** without the written **[~~approval~~ permission]** of the Director. This regulation does not prohibit the stocking of private impoundments.

Section 2.Transportation, Possession and Sale.

It shall be unlawful for any person to transport, purchase, possess, or sell walking catfish (Clarius batrachus) or the white amur or grass carp (Ctenopharyngodon idella) without the written **[~~approval~~ permission]** of the Director.

[~~REGULATION FF11.~~ NT-8.] LAKE COMO.

It shall be unlawful for any person to use or have in his **[or her]** possession any live fish, as bait, while fishing **[~~in~~ on]** Lake Como**[~~, Smyrna~~]**.

SEVERABILITY:

If any section, subsection, **[paragraph,]** sentence, phrase or word of these **regulations [~~shall be~~ is]** declared unconstitutional **[~~under the Constitution of the State of Delaware or of the United States or~~]** by a **[~~State or Federal Court~~ court]** of competent jurisdiction, the remainder of these regulations shall **[~~be~~ remain]** unimpaired and shall continue in full force and effect, and proceedings thereunder shall not be affected.

[~~ADOPTION:~~

~~(These draft revised regulations are planned for adoption in early 1999. All regulations will only be adopted after full public review and revision under Delaware's Administrative Procedures Act and the Department's Regulatory Development Process as adopted on October 21, 1997.) Delaware Division of Fish and Wildlife.~~]

DIVISION OF WATER RESOURCES

Statutory Authority: 7 Delaware Code, Section 6010 (7 **Del.C.** 6010)

Secretary's Order No. 99-W-0038

Re: Revisions to the State of Delaware Surface Water Quality Standards

Date of Issuance: July 15, 1999

Effective Date of Regulatory Provisions: August 11, 1999

I. BACKGROUND FINDINGS OF FACT

On February 5, 1990, DNREC completed a triennial review of its Surface Water Quality Standards Regulation ("WQS"). Soon after adoption, these 1990 WQS were appealed by a consortium of Delaware NPDES permit holders. As a result of the appeal, revisions were negotiated to address the appellants' concerns. On February 26, 1993, DNREC adopted the changes to the WQS that had been negotiated through a settlement agreement. These 1993 WQS were certified by Delaware's Attorney General and then forwarded to the United States Environmental Protection Agency, Region III ("Region III") for review.

In an April 13, 1998, letter, EPA notified the State of Delaware that certain provisions of the February 26, 1993, regulations were inconsistent with the Clean Water Act ("CWA") and EPA regulations. Those provisions were disapproved. In an enclosure to the April 13, 1998 letter, EPA described their objections to the provisions, provided the regulatory basis for the disapproval, and identified changes that must be made in order to meet the requirements of the CWA. In addition to the disapproved provisions, EPA

also recommended that several other sections of the WQS be revised. To ensure compliance with the CWA and EPA regulations, the State of Delaware, in accordance with 7 Del. C. Section 6010, proposed amendments to the Table of Contents, Sections 2, 3, 5.3, 5.4, 5.5, 5.6, 8.2, 9.3, 10, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 12.1 and Table 1 of the WQS.

On March 29, 1999, the Widener University School of Law sent EPA a notice of intent to file a citizen suit. The basis for the proposed suit was EPA's failure to perform the nondiscretionary duty of promulgating water quality standards (since 90 days had lapsed between EPA's disapproval of Delaware's standards without Delaware correcting the deficiency). On April 27, 1999, EPA responded to Widener and cited Delaware's commitment to correct WQS deficiencies and complete a scheduled triennial review. In an additional May 18, 1999, response to Widener, EPA explained it would be more cost effective and timely for Delaware to correct these deficiencies since Delaware had already begun the process. EPA restated its commitment to move expeditiously to publish proposed federal standards in the event Delaware was unable to cure the deficiencies in this process.

A public hearing was held on July 1, 1999, to address deficiencies noted in EPA's April 13, 1998, disapproval letter and other proposed changes to the WQS. An additional public hearing has been scheduled for September 1, 1999, to satisfy Delaware's next mandatory triennial review of its WQS. That proceeding will allow comment on every provision of the WQS, rather than specified Sections. Delaware's Regulations Governing the Control of Water Pollution are also scheduled to be modified, and public workshops are currently proposed for September 13, 1999, and January 10, 2000.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. On July 1, 1999, DNREC held a public hearing concerning proposed changes to the WQS substantially similar to those submitted to EPA on October 31, 1997. Nicholas A. DiPasquale, the Secretary of DNREC was present at the public hearing and reviewed the record of this proceeding. This hearing was originally scheduled for the DNREC Auditorium at 2:00 p.m., but was moved to 2:30 p.m. at the Delaware Technical Community College, Downs Lecture Hall due to flooding in the DNREC Auditorium the morning of the hearing. Notice of the relocation of the hearing was posted on the front door of the DNREC offices, and known interested parties were contacted by telephone concerning the change. The record demonstrates that proper notice of the hearing was provided as required by law.

2. The legal notice of the public hearing indicated that the public hearing record
would close at the conclusion of the July 1, 1999, hearing. Several commentors requested additional time in which to submit comments after the close of the public hearing. The Hearing Officer granted this request and stated the hearing record would be kept open until 4:30 p.m. on July 9, 1999. Notice of this extension of the public comment period was also advertised in the newspaper. The extension granted less time than requested; however, the record indicates DNREC's commitment to EPA that it would act on the proposed changes to the WQS by August 1, 1999, in order to convince EPA to forestall implementation of superseding federal regulations. Thus, it was not possible to grant a longer post-hearing comment period. Moreover, the public has already been afforded a longer comment period than is typically provided because of additional federal requirements.

3. In a memorandum dated July 8, 1999, submitted for the record, the Watershed
Assessment Section provided a listing of major issues to date, salient issues related to each, and a recommended path forward.

4. This rulemaking concerns only the Sections that DNREC had proposed to revise;
however, every provision of the Water Quality Standards will be subject to public comment during the upcoming triennial review.

5. Eastern Environmental Law Center (Widener Environmental Law Clinic) supports all of the proposed revisions to the WQS. Eastern Environmental Law Center's additional recommendation to modify the definition of "waters of the state" was beyond the scope of this proceeding and should be raised during the upcoming triennial review.

6. The Delaware Chapter of the Sierra Club and Green Delaware supported the proposed revisions to the WQS.

7. EPA Region III supported the proposed revisions to the WQS. EPA's comments
indicate the proposed revisions should correct the deficiencies referenced in the Administrator's April 13, 1998, letter and should also address Region III's concerns about approved provisions that Region III intended to refer to the EPA Administrator for action.

8. SPI Polyols Inc. ("SPI") generally objected to changing any Section of the WQS
that was not specifically disapproved in EPA's April 13, 1998, letter. SPI's objection, based solely on a perceived lack of time and not relating substantively to any provision, is not supported by the record. The record demonstrates a short but nevertheless adequate time frame for submission and review of public comments and a reasonable basis in the record to make the changes discussed herein.

9. There was no specific objection to any of the following proposed provisions, and the record supports their promulgation:

i. The text of Secretary's Order No. 93-0089 dated February 26, 1993, should be stricken from the WQS.

ii. The definition of Lethal Concentration should be modified as proposed.

iii. Section 5.5 should be stricken.

iv. Section 5.6 should be stricken.

v. The proposed change to Section 8 clarifying that unless specifically noted otherwise, criteria are based on total metal, is unopposed and supported by the record. This revision should cure one of the disapproval items noted in EPA's April 13, 1998, letter.

vi. Footnote (j) within Section 10 should be modified as proposed.

10. The record indicates that if Delaware does not remove Section 5.3 relating to intake credits, EPA will promulgate federal regulations to preempt Section 5.3 to complete its mandatory duty and to avoid citizen litigation. EPA's position is that this provision when included in the WQS creates an alternative water quality standard. EPA notes that placing this provision in the Water Quality Standards makes it subject to stricter criteria than it would be subject to in the Regulations Governing the Control of Water Pollution, although the provision would still have to be revised to be consistent with the Clean Water Act. In addition, the record indicates that intake credits are implementation issues that are appropriately addressed in the Regulations Governing the Control of Water Pollution and not in the WQS. The record contains public notice of a workshop to be held on September 13, 1999, and a workshop tentatively scheduled for January 10, 2000 to discuss potential amendments to the Regulations Governing the Control of Water Pollution. That public notice specifically identifies intake credits within the scope of changes to be considered in revisions to the Regulations Governing the Control of Water Pollution. Revision of the Water Quality Standards before the Regulations Governing the Control of Water Pollution is a natural progression because the Regulations Governing the Control of Water Pollution implement the Water Quality Standards. Opposition to removing Section 5.3 from the WQS is based on the perception that removal of this provision will harshly and adversely affect certain NPDES permittees in future reissuance proceedings without any environmental benefit. These issues should be adequately addressed by the upcoming revisions to the Regulations Governing the Control of Water Pollution and in future reissuance proceedings. Thus, the record demonstrates that opposition to deletion of Section 5.3 is based on concerns that are premature and speculative. Therefore, this record supports deletion of Section 5.3 in its entirety.

11. The record indicates that if Delaware does not make the proposed changes to Section 12 relating to low flow waters, EPA will promulgate federal regulations to preempt this Section to complete its mandatory duty and to avoid citizen litigation. EPA's position is that when discharges create habitat supporting aquatic life, the Clean Water Act requires protection of that aquatic habitat. EPA believes that Water Quality Standards that remove this protection are not protective of the environment. Opposition to this change is based on the perception that removal of this provision will harshly and adversely affect certain NPDES permittees in future reissuance proceedings without any environmental benefit. These issues should be adequately addressed by the upcoming revisions to the Regulations Governing the Control of Water Pollution and in future NPDES permit reissuance proceedings. Thus, the record demonstrates that opposition to the proposed modification to Section 12 is based on concerns that are premature and speculative. Therefore, this record supports the proposed revisions to Section 12 relating to low flow waters.

12. The record indicates that if Delaware does not cure the disapproval relating to Section 5.4, erosion and corrosion, EPA will promulgate federal regulations to preempt this Section to complete its mandatory duty and to avoid citizen litigation. EPA's position is that this Section is not sufficiently protective of the environment and creates alternative water quality standards. DNREC proposed deleting Section 5.4 in its entirety and adopting similar language in the Regulations Governing the Control of Water Pollution which was one of EPA's recommendations to cure this disapproval. The rationale for this change is that Section 5.4 concerns an implementation issue that is appropriately addressed in the Regulations Governing the Control of Water Pollution.

Nevertheless, several permittees opposed deletion of Section 5.4 with later adoption of similar language in the Regulations Governing the Control of Water Pollution based on the perception that removal of the provision would harshly and adversely affect certain NPDES permittees in future reissuance proceedings without any environmental benefit. The record demonstrates that these concerns are premature and speculative. However, given the amount of opposition to this change based on this perception, it is appropriate in this instance to alleviate concern where possible. Since EPA offered an alternative to completely deleting Section 5.4 that could still cure the disapproval, that alternative is appropriate in this instance. That alternative is to modify the language of Section 5.4 in the Water Quality Standards to make Section 5.4 an interim variance provision using the language suggested by EPA as reflected in the record. Since this is an interim provision, it should expire upon the effective date of a subsequent Secretary's Order that creates a new provision covering corrosion and erosion in the State of Delaware Regulations Governing the Control of Water Pollution.

13. The record supports withdrawing the proposed revisions to the Dissolved Oxygen criteria in Sections 11.1, 11.2, 11.3 and 11.4. Therefore, the existing language should be retained. This issue should be fully explored during the upcoming triennial review.

14. The record supports withdrawing the proposed revisions to Section 11.5, ERES Waters. Therefore, the

existing language should be retained. This issue should be fully explored during the upcoming WQS triennial review.

15. Kent County was concerned about arbitrary enforcement of the WQS. This comment is beyond the scope of this proceeding but may be raised during the upcoming WQS triennial review. Additionally, Kent County pointed out that Tables 1 and 2 do not reference their technical source. To the extent that this comment relates to the aquatic life criteria for chlorine, the basis for this criteria may be found in the EPA document entitled "Ambient Water Quality Criteria for Chlorine - 1984" (DNREC Exhibit 32). Otherwise, this comment is beyond the scope of this proceeding but may be raised during the upcoming triennial review. Thus, the record supports making the proposed change to Section 9, Table 1.

16. The record supports the proposed revision to the Section 2, definition of "natural conditions" that more accurately reflects the literal meaning of the words. Even DuPont's opposition describing the existing definition as a "logical, pragmatic, achievable pathway to the primary ERES goals of returning said designated waters to historical conditions" implicitly acknowledges that the current definition is not consistent with the literal meaning of the term.

17. The proposed revisions to Sections 2 and 3 relating to Antidegradation are supported by the record. SPI recommended that DNREC review the Texas Antidegradation language, but that information was not submitted as a part of the record and cannot be considered in this rulemaking. SPI may raise the issue and introduce the Texas language in the upcoming triennial review.

18. Kent County commented that limited stream depth and limited access preclude primary contact recreation (swimming) in many waters. Nevertheless, the record supports the proposed revision designating all surface waters of the State for primary contact recreation, which is consistent with the Clean Water Act's goal of achieving fishable/swimmable waters.

19. The proposed revision to Section 8.2(a), design flow for carcinogens was supported by technical evidence in the record (DNREC Exhibit 34) whereas the weight of the evidence does not support DuPont's position to retain the median flow as the design flow for human health criteria for carcinogens.

20. Although the record supports deletion of Section 5.6, doing so creates an obsolete reference to that Section within existing Section 5.7. Section 5.7 refers to factors listed in section 5.6. In order to avoid this structural problem, the Department should continue to consider the following factors in making determinations pursuant to section 5.7. The information and factors include the following, in their entirety:

(a) Readily available and existing physical, chemical, and biological data on the discharge and receiving water including, but not limited to, the ambient background concentration of pollutants in the receiving water and the documented condition of the natural species community in the receiving water;

(b) The relative contribution of point and nonpoint sources of pollution;

(c) Instream dilution and dispersion of the discharged pollutant(s) in the receiving water;

(d) Variability of the pollutant(s) in the discharge;

(e) Fate mechanisms of discharged pollutants within the receiving water including, but not limited to, volatilization, photolysis, hydrolysis, sedimentation, and biodegradation;

(f) Bioavailability of the discharged pollutant(s) in the receiving water as well as synergistic or antagonistic interactions; and

(g) Analytical detectability of the pollutant(s) in the discharge. Where information is available which shows that reliable quantification at concentrations less than the criteria contained herein using analytical methods required by permit, regulation, or otherwise approved by the Department is not feasible, Minimum Analytical Levels (MAL) will be used as an interim measure by the Department to determine compliance with the criteria.

III. ORDER

IT IS HEREBY ORDERED that the proposed revisions to the State of Delaware Surface Water Quality Standards as modified by the above findings and conclusions are hereby promulgated. IT IS ALSO ORDERED that provisions in existing NPDES permits that may be adversely affected by the changes to Sections 5.3, 5.4 and 12 will not be modified until after the effective date of a subsequent Secretary's Order implementing appropriate changes to the State of Delaware Regulations Governing the Control of Water Pollution. IT IS ALSO ORDERED that the Department should continue to consider the information and factors previously listed in Section 5.6 (set forth in Part II, number 19 of this order) in making determinations pursuant to Section 5.7. IT IS ALSO ORDERED that upon the effective date of a subsequent Secretary's Order making changes to the State of Delaware Regulations Governing the Control of Water Pollution relating to corrosion and erosion, Section 5.4 of the WQS will automatically expire and become void. FINALLY, IT IS ALSO ORDERED that Sections 5.3, 5.5 and 5.6 be reserved to preserve the numbering integrity of the remaining provisions until such time that comprehensive revisions are undertaken as a part of the Water Quality Standards triennial review.

IV. REASONS

The record shows that the proposed revisions are

consistent with the policies and purposes of 7 Del. C. Chapter 60. The amendments are intended to be protective of the environment and water quality of the State of Delaware and be consistent with the Clean Water Act, its goals and enabling regulations. The record demonstrates that the suggested burden to certain NPDES permittees is premature and speculative and is an implementation concern that will be addressed in upcoming revisions to the Regulations Governing the Control of Water Pollution and future reissuance proceedings. The temporary provision in Section 5.4 will be protective of the environment and, to the extent it is feasible and appropriate, allay some of the commentors' concerns. Moreover, my decision to temporarily withhold modifications to existing provisions of permits that might be adversely affected by the changes to Sections 5.3, 5.4 and 12 is intended to protect and conserve water resources while balancing the interests of the potentially affected parties.

Nicholas A. DiPasquale, Secretary

TABLE OF CONTENTS

*** THE ABOVE PAGE NUMBERS REFER TO THE ORIGINAL DOCUMENT AND NOT TO THE REGISTER.**

~~SECRETARY'S ORDER NO. 93-0089~~
~~Date of Issuance: February 26, 1993~~
~~Re: Adoption of Revisions to Surface Water Quality Standards~~

~~I.~~ ~~Background~~

~~A public hearing was held on April 22, 1992, to receive comments on proposed revisions to the February 2, 1990 version of Delaware's Surface Water Quality Standards. The revisions proposed fell into two categories. The first category included proposed additions and deletions resulting from settlement negotiations between DNREC and twenty NPDES permit holders who had filed administrative appeals immediately upon DNREC's promulgation of the February 2, 1990 version of the Surface Water Quality Standards. The second category of revisions included additions and deletions proposed unilaterally by DNREC to Sections 3, 5, and 9 of the Standards.~~

~~II.~~ ~~Findings~~

~~1. Proper notice of the public hearing was provided as required by law.~~

~~2. As justified by the record and discussed in the Hearing Officer's Report, all of the proposed additions and deletions resulting from the aforementioned settlement negotiations should be adopted, with a single exception. The definition for the term "minimum analytical level" which appears in Section 2 should be modified because it includes a quantitative standard for interlaboratory precision and bias that cannot be met in all situations. The modified definition that the Department proposes for the final rule retains all of the critical features of the definition originally agreed upon between DNREC and the appellants.~~

~~3. Several comments were received on the unilateral revisions DNREC proposed for Section 3 (Antidegradation). These comments can be addressed by revising the definition of the term "degradation" and making clarifying changes to Sections 3.1 and 3.2.~~

~~4. The regulated community (including several of the appellants), environmental groups, and the U. S. Environmental Protection Agency all voiced strong opposition to Section 5.5 (Modifications to Water Quality-Based Effluent Limitations). This section was unilaterally proposed by the Department. In light of the broad-based opposition, all interests are best served by withdrawing this section from current consideration.~~

~~5. Commenters on Section 5.6 and 5.8 consistently expressed their opposition to inclusion of the phrase, "to the satisfaction of the Department". Neither the intent nor the force of Sections 5.6~~

or 5.8 are adversely affected by the absence of the objectional phrase. Therefore, the Department has agreed to remove the phrase from these two sections in the final version of the Standards. Several additional comments on Section 5.8 were received and carefully considered. It was determined that a modification to the language proposed at the April 22 hearing was necessary to satisfactorily address these comments. The final language proposes to add flexibility to this section by changing a mandatory requirement on applicants to demonstrate compliance with water quality standards to an optional analysis of standards compliance. The final language more accurately reflects actual Department operating procedures on this matter and in no way interferes with the Department's authority to request additional information of an applicant to help the Department make decisions on particular permit applications.

6. The U. S. Environmental Protection Agency commented on many sections of the proposed revisions to Delaware's Standards. The most serious of these comments was that EPA considers the proposed revisions to Sections 5.3, 5.4, 5.5, 5.7, 5.8, and possibly 5.6, as modifications to the State of Delaware Regulations Governing the Control of Water Pollution. The Department does not disagree with EPA that the sections in question could function in the Regulations Governing the Control of Water Pollution. In fact, the Department fully intends to propose revisions to the Regulations Governing the Control of Water Pollution in the near future that include provisions equivalent to Sections 5.3, 5.4, 5.6, 5.7 and 5.8 of the Standards. However, this fact does not preclude Delaware from including the sections in question in its Surface Water Quality Standards. The record from the April 22, 1992 hearing clearly shows that these provisions arose in conjunction with administrative appeals of the February 2, 1990 version of Delaware's Surface Water Quality Standards, not the Regulations Governing the Control of Water Pollution. It was logical, and a matter of administrative necessity, that the Department resolve the dispute through the Standards program. Beyond these reasons, DNREC considers the sections in question to be policies that directly affect the application and implementation of its Standards. Federal regulations (40 CFR Part 131.13) provide States the discretion to include such policies directly in their water quality standards, subject to EPA review and approval. In sum, there is no basis in the record, legal or otherwise, not to include these provisions in the final version of Delaware's Surface Water Quality Standards, except in the case of Section 5.5 which was discussed in Finding 4 above.

7. The changes discussed in Findings 2 through 6 above do not alter the balance of interests achieved during settlement negotiations. The final rule is both protective of Delaware's surface waters and provides sufficient flexibility for those who must comply.

8. Although revision of the Standards consistent with this Order will provide final resolution of a complex dispute, many questions remain in the minds of the regulated community concerning several Standards-related issues. Questions include the extent of future monitoring, field investigation, and mathematical modeling needed to demonstrate compliance with the Standards. In response to these questions, the Department should endeavor to develop guidance on these topics as a key component of its overall water quality standards program.

III. Changes Ordered

Section 2: Definitions

Degradation:Anyadverse change in water quality or existing uses.

Minimum Analytical Level:The lowest concentration of a substance that can be quantified within specified limits of interlaboratory precision and accuracy under routine laboratory operating conditions in the matrix of concern.

Section 3: Antidegradation

3.1 Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. Degradation of water quality in such a manner that results in reduced number, quality, or river or stream mileage of existing uses shall be prohibited. Degradation shall be defined for the purposes of this section as a statistically significant reduction, accounting for natural variations, in biological, chemical, or habitat quality s measured or predicted using appropriate assessment protocols.

3.2 Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected. In the case of waters of exceptional recreational or ecological significance, existing quality shall be maintained or enhanced. Limited degradation may be allowed if the Department finds, after full satisfaction of public participation provisions of 7 Del. Code Sections 6004 and 6006 and the intergovernmental coordination provisions of the State's continuing planning process as required in 40 CFR Part 130, that allowing lower water quality is necessary to accommodate important social or economic development, or would result in a substantial net environmental or public health benefit, in the area in which the waters are located. In allowing such degradation or lower water quality, the Department shall assure water quality adequate to protect existing uses fully. Further, the Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

Section 5: Exceptions, Modifications and Conditions

~~5.5 Delete Proposed Text in its Entirety and Renumber 5.6, 5.7, 5.8, and 5.9 as 5.5, 5.6, 5.7, and 5.8, Respectively.~~

~~5.5 Temporary sources of pollution, including but not limited to stream or ditch installation, improvement, maintenance, or stabilization projects, dredge operations, and waste site remediation projects, may be permitted even if degradation may be expected to occur. Permission may be granted provided that the applicant can demonstrate that after a minimal period of time the number, quality, and river or stream mileage of designated uses, and the degree of attainment of water quality standards, will return or be restored to conditions equal to or better than those existing just prior to the temporary source of pollution.~~

~~5.7 Any person who shall apply for a permit to discharge to the waters of the State shall have the opportunity to submit an analysis to the Department at the time of application to demonstrate that said discharge will not cause, have the reasonable potential to cause, or contribute to an excursion of the receiving stream's water quality standards. The Department shall consider any analysis submitted by the applicant and also conduct its own analysis in making a determination whether the discharge causes, has the reasonable potential to cause, or contributes to an excursion of standards. The Department's review of analyses submitted by applicants as well as analyses the Department conducts on its own shall consider the information and factors listed in Section 5.6 of these Standards. Analyses performed under Section 5.7 shall be conducted in concert with the requirements of Section 3, as applicable. A public hearing, pursuant to 7 Del. Code, Sections 6004 and 6006, may be held to gather public comment on any analysis submitted by an applicant in conjunction with Section 5.7.~~

~~IV. Order~~

~~It is hereby ordered that the Delaware Surface Water Quality Standards be revised to reflect the changes proposed at the April 22, 1992 hearing along with the modifications presented in the previous section of this Order. The revised Standards, attached hereto, are effective as of the signature date below.~~

~~Date~~ ~~Edwin H. Clark, II~~
~~Secretary~~

DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL
SURFACE WATER QUALITY STANDARDS

Section 1: Intent

1.1 It is the policy of the Department to maintain within its jurisdiction surface waters of the State of satisfactory quality consistent with public health and public recreation purposes, the propagation and protection of fish and aquatic life, and other beneficial uses of the water.

1.2 Where conflicts develop between stated surface water uses, stream criteria, or discharge criteria, designated uses for each segment shall be paramount in determining the required stream criteria, which, in turn, shall be the basis of specific discharge limits or other necessary controls.

1.3 Where existing facilities operating under a permit from this Department are required to reduce pollution concentrations or loadings due to the implementation of these surface water quality standards, a reasonable schedule for compliance may be granted in accordance with standards or requirements established in applicable statutes and regulations.

1.4 The Department intends to develop an agency-wide program to assess, manage, and communicate human health cancer risks from the major categories of environmental pollution under its jurisdiction. As a result of this activity, it may be necessary to adjust the upper bound worst case risk management level stated in Section 9.3(b)(i).

Section 2: Definitions

Acute: Involving a stimulus severe enough to rapidly induce an adverse response; in toxicity tests, an adverse response observed in 96 hours or less is typically considered acute. An acute effect is not always measured in terms of lethality; it can measure a variety of short term adverse effects.

Additive effect: The total effect of a mixture of pollutants which is equal to the arithmetic sum of the effects of the individual pollutants in the mixture.

Agriculture: The use of land and water in the production of food, fiber and timber products.

Antagonistic effect: The total effect of a mixture of pollutants which is less than the arithmetic sum of the effects of the individual pollutants in the mixture.

~~Antidegradation Statement:Any provision or policy that has as its basis the prevention of deterioration of water quality or designated uses.~~

Average: Unless otherwise noted, the arithmetic mean of a representative group of samples for a specified parameter. Representativeness shall be determined through application of appropriate statistical techniques to data collected at times of critical ambient conditions, as determined on a parameter-by-parameter basis.

Best Management Practice (BMP): BMPs are methods, measures or practices that are determined by the Department to be reasonable and cost-effective means for a person to meet certain, generally nonpoint source, pollution control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during or after

pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

Best scientific judgement:Findings, conclusions, or recommended actions which result from the application of logical reasoning and appropriate scientific principles and practices to available and relevant information on a particular situation.

Bioavailability: A measure of the physicochemical access of a pollutant to an organism.

Biodegradation:The biological decomposition of natural or synthetic organic materials by microorganisms.

Carcinogen:A substance that increases the risk of benign or malignant neoplasms (tumors) in humans or other animals. Carcinogens regulated through these Standards include but may not be limited to those toxic substances classified as Group A or Group B carcinogens as defined in 51 FR 185 (9/24/86).

Chronic: Involving a stimulus that produces an adverse response that lingers or continues for a relatively long period of time, often one-tenth of the life span or more. Chronic should be considered a relative term depending on the life span of the organism. A chronic effect can be lethality, growth or reproductive impairment, or other longer term adverse effect.

Clean Water Act: 33 U.S.C. 1251 et. seq., as amended.

Cold water fish use: Protection of fish species (such as from the family Salmonidae) and other flora and fauna indigenous to a cold water habitat.

Complete mix: The concentration of a discharged pollutant varies by no more than 5% over the cross-sectional area of the receiving water at the point of discharge.

Conservation plan: A conservation plan is a record of land user decisions affecting land use and conservation treatment of natural resources including soil, water, air, plant, and animal resources. It is comprised of resource management systems which are groups of interrelated conservation practices (BMPs) and management measures formulated to protect, restore, or improve the resource base. Conservation plans are usually developed with the assistance of conservation districts using district BMP standards (ref: Field Office Technical Guide, USDA Soil Conservation Service).

Control structure: A dam, weir or other structure placed by man to regulate stream flow and/or create an impoundment.

Critical flow: A statistically determined minimum flow, which has a defined duration and recurrence interval.

Degradation: Any adverse change in water quality or existing uses.

Department: Delaware Department of Natural Resources and Environmental Control.

Designated uses: Categories of surface water utilization as defined in Section 10.

Diadromous: Describes fish which migrate to and from marine water and freshwater for the purpose of spawning.

Discharge length scale: The square root of the cross-sectional area of any discharge outlet.

Dispersion: A physical mixing process which results in the scattering of particles or dissolved materials in the water column.

Early life stages: Life stages for fish which include all embryonic and larval stages, and all juvenile forms to 30 days following hatching.

Ephemeral: Describes a stream which contains flowing water only for short periods following precipitation events.

Excavated waters: Waters of the State which are wholly human-created. Such waters shall include but not be limited to upland basins with surface outlets, drainage and tax ditches which are ephemeral, and dug ponds.

Existing use: Any use of any waters of the State which has, or likely has, occurred, or the water quality at any time has been satisfactory to support, on or after November 28, 1975.

Fish, aquatic life and wildlife: All animal and plant life found in Delaware, either indigenous or migratory, regardless of life stage or economic importance.

Foam: Frothy, generally stable, whitish mass of bubbles formed on or in the water upon agitation of the water.

Fresh water: Waters of the State which contain natural levels of salinity of 5 parts per thousand or less.

Fresh water flow: That flow which represents the amount of water passing a measurement point in a non-tidal system.

Hydrolysis: A reaction of a chemical with water which results in the cleavage of a chemical bond.

Indigenous: Native, or naturally growing, existing, or produced.

Industrial Water Supply: Any water that is protected for use for industrial purposes, including non-contact cooling water.

Intake water: Water used by a facility from surface water, groundwater, commercial, or other sources.

Intermittent: Describes a stream which contains flowing water for extended periods during a year, but does not carry flow at all times.

Lethal concentration (LC): The point estimate of the toxicant concentration that would be lethal to a given percentage of test organisms during a specific period. ~~Toxicant concentration producing death of test organisms. Expressed as LC_{50}, it means the concentration (expressed in mg/L or percent effluent as appropriate) killing 50% of exposed organisms over a specified period of time (reference: *Technical Support Document for Water Quality-Based Toxics Control*, U.S. EPA, September, 1985).~~

Marine water: Waters of the State which contain natural levels of salinity in excess of 5 parts per thousand.

Minimum Analytical Level:The lowest concentration of a substance that can be quantified within specified limits of interlaboratory precision and accuracy under routine laboratory operating conditions in the matrix of concern.

NPDES: National Pollutant Discharge Elimination System as provided in the Clean Water Act.

Natural conditions: Water quality characteristics found or expected in the absence of human-induced pollution due to point or nonpoint sources. ~~Water quality characteristics which would exist in the absence of point source discharges and with all non-point sources employing best management practices. For purposes of Section 11.5 (ERES Waters) natural conditions shall be determined for specific stream basins through the adoption of pollution control strategies pursuant to Section 11.5(d).~~

Net advective flow: That flow which represents the difference between the amount of water passing a point in a tidal system on a flood tide and the subsequent ebb tide. It is approximately equal to the freshwater input to the system upstream of that point.

Normal Corrosion: An electrochemical reaction that results in the dissolution or removal of metal from a solid metal surface. For specific applications considered by the Department, normal corrosion rates shall be as published by the National Association of Corrosion Engineers (Reference: Corrosion Data Survey - Metals Section, National Association of Corrosion Engineers, 1985, as updated from time to time) or, for applications not specifically addressed in the above reference, such other reliable data.

Normal Erosion: The progressive loss of original material from a solid surface due to mechanical interaction between that surface and a fluid, a multi-component fluid or an impinging liquid or solid particle. (Reference: Standard Practice for Liquid Impingement Erosion Testing, ASTM Designation G73-82, 1987; or other authoritative source for materials or conditions not covered by the referenced standard).

Nuisance condition: Any condition that, as a result of pollutant addition to a stream, causes unreasonable interference with the designated uses of the waters or the uses of the adjoining land areas.

Nuisance species: Any species of fish, other animal, or plant living in or near the water, the presence of which causes unreasonable interference with the designated uses of the waters or the uses of adjoining land areas. Nuisance species include but are not limited to filamentous and blue-green algae.

Nutrient: Any element or compound essential as a raw material for organism growth and development, including but not limited to nitrogen and phosphorus.

One-hour average: The arithmetic average of the samples collected during a continuous one-hour period.

Overenrichment: Excessive addition of nutrients to a water body, resulting in deterioration of designated uses of the waters.

Perennial: Describes a freshwater stream which contains flowing water at all times.

Person: Any individual, trust, firm, joint stock company, federal agency, partnership, corporation (including a government corporation), association, state, municipality, commission, political subdivision of a state, or any interstate body.

Photolysis: A light-catalyzed degradation reaction that occurs when light strikes certain chemicals.

Pollutant: Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, hydrocarbons, oil and product chemicals, and industrial, municipal, and agricultural waste discharged into water.

Practicable: Available and capable of being done after taking into consideration cost and existing technology, as well as logistics in light of overall facility operations or project purposes.

Primary contact recreation: Any water-based form of recreation, the practice of which has a high probability for total body immersion or ingestion of water (examples include but are not limited to swimming and water skiing).

Propagation: Reproduction of fish, aquatic life and wildlife within their natural environment.

Public water supply: Any waters of the State designated as public water supply in Section 10.

Regulatory mixing zone:A designated, mathematically defined portion of a receiving water body, in close proximity to a discharge, in which initial dilution, dispersion, and reaction of discharged pollutants occur. See Section 6 for details on use of term.

Risk management level: That level above which an assessed risk is unacceptable from a public health perspective.

Scientifically Reasonable Request: Any request that is based upon material, substantial, and relevant information and would be accepted as reasonable by most persons trained and competent in the subject of the request.

Scum: A thin layer of impurities which forms on the surface of waters of the State.

Secondary contact recreation: A water-based form of recreation, the practice of which has a low probability for total body immersion or ingestion of water (examples include but are not limited to wading, boating, and fishing).

Sedimentation: The movement of solid particles and adsorbed chemicals toward the bottom of the water column under the influence of gravity.

Shellfish: Any species of fresh, brackish or salt water mollusk that is commonly considered to be edible. Typical

edible mollusks include but are not limited to clams, mussels, oysters, scallops, and whelks.

Stream basin: A specified drainage area from which (in most cases) all waters exit through a single outlet.

Surface water: Water occurring generally on the surface of the earth.

Synergistic effect: The total effect of a mixture of pollutants which is greater than the arithmetic sum of the effects of the individual pollutants in the mixture.

Systemic toxicant: A toxic substance that has the ability to cause health effects within the body at sites distant from the entry point due to its absorption and distribution. Systemic toxicants are believed to have threshold concentrations or levels below which no health effects occur.

Tidal: Surface waters characterized by periodic rise and fall due to gravitational interactions between the sun, moon, and earth.

Toxic substance: Any substance or combination of substances including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformities in such organisms or their offspring.

Toxicity: The ability to cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformities in organisms or their offspring.

Toxicity test: The means to determine the toxicity of a chemical or effluent using living organisms. A toxicity test measures the degree of response of an exposed test organism to a specific chemical or effluent.

True daily mean: The mean value for a parameter which accurately accounts for diurnal variations over one 24-hour period.

Volatilization: The loss of a chemical from the water column due to mass exchange across the air-water interface.

Water distribution piping and appurtenances: Pipes and piping systems, along with integral components thereof, which are used to convey water from one point to another.

Water pollution: Man-made or human-induced alteration of the chemical, physical, biological or radiological integrity of surface waters of the State.

Waters of the State:

(1) All surface waters of the State including but not limited to:

(a) Waters which are subject to the ebb and flow of the tide, including but not limited to estuaries, bays, and the Atlantic Ocean;

(b) All interstate waters, including interstate wetlands;

(c) All other waters of the State, such as lakes, rivers, streams (including intermittent and ephemeral streams), drainage ditches, tax ditches, creeks, mudflats, sandflats, wetlands, sloughs, or natural or impounded ponds;

(d) All impoundments of waters otherwise defined as waters of the State under this definition;

(e) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in (a)-(d);

(2) Waste and stormwater treatment systems, including but not limited to treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (other than cooling ponds which otherwise meet the requirements of subsection (l) of this definition) are not waters of the State.

Waters of exceptional recreational or ecological significance (ERES): Waters which are important, unique, or sensitive from a recreational and/or ecological perspective, but which may or may not have excellent water quality. Such waters shall normally have regional significance with respect to recreational use (fishing, swimming and boating), or have significant or widespread riverine, riparian, or wetland natural areas.

Water quality: The physical, chemical, and biological characteristics of water with respect to its suitability for a particular use. For the purposes of these Standards, water quality shall be assessed in terms of chemical composition, biological integrity, and physical habitat.

Water-Quality Based: Generally refers to requirements for pollution control that are in excess of technology-based minimum requirements, including but not limited to those listed in Sections 301(b) and 306 of the Clean Water Act. Such controls are designed to reduce pollutants to a level that will allow water quality standards to be attained where said standards would not be attained through application of the technology-based controls.

Water quality criterion: An element of water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular designated use.

Water quality standard: A rule or limit defined herein which consists of a designated use or uses for waters of the State and water quality criteria for such waters based upon such designated uses.

Wetlands: Wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Section 3: Antidegradation Policy ~~Statement~~

3.1 Existing instream water uses and the level of water quality necessary to protect the existing uses shall be

maintained and protected. Degradation of water quality in such a manner that results in reduced number, quality, or river or stream mileage of existing uses shall be prohibited. Degradation shall be defined for the purposes of this section as a statistically significant reduction, accounting for natural variations, in biological, chemical, or habitat quality as measured or predicted using appropriate assessment protocols.

3.2 Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected. In the case of waters of exceptional recreational or ecological significance, existing quality shall be maintained or enhanced. Limited degradation may be allowed if the Department finds, after full satisfaction of public participation provisions of 7 Del. Code Sections 6004 and 6006 and the intergovernmental coordination provisions of the State's continuing planning process as required in 40 CFR Part 130, that allowing lower water quality is necessary to accommodate important social or economic development, or would result in a substantial net environmental or public health benefit, in the area in which the waters are located. In allowing such degradation or lower water quality, the Department shall assure maintenance of water quality adequate for full protection of existing uses. Further, the Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

3.3 Where high quality waters constitute an outstanding National resource, such as waters of National parks and wildlife refuges, existing quality shall be maintained and protected.

3.4 In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Water Quality Act of 1987.

3.5 The hearing requirement imposed by Subsections 3.2 above shall not be construed to impose a requirement for an additional public hearing where such a hearing is otherwise held pursuant to law, provided the requirements of this section are hereby met.

Section 4: General Stream Criteria

4.1 All surface waters of the State (except as detailed in Sections 8 and 12) shall meet the following minimum criteria:

(a) Waters shall be free from substances that are attributable to wastes of industrial, municipal, agricultural or other human-induced origin. Examples include but are not limited to the following:

(i) Floating debris, oil, grease, scum, foam, or other materials on the water surface that may create a nuisance condition, or that may in any way interfere with attainment and maintenance of designated uses of the water,

(ii) Settleable solids, sediments, sludge deposits, or suspended particles that may coat or cover submerged surfaces and create a nuisance condition, or that may in any way interfere with attainment and maintenance of designated uses of the water,

(iii) Any pollutants, including those of a thermal, toxic, corrosive, bacteriological, radiological, or other nature, that may interfere with attainment and maintenance of designated uses of the water, may impart undesirable odors, tastes, or colors to the water or to aquatic life found therein, may endanger public health, or may result in dominance of nuisance species.

4.2 Certain waters of the State are subject to natural variations in salinity such that those waters meet the definition of fresh at some times and marine at other times. For such waters, the more stringent of fresh or marine water quality criteria or standards as detailed throughout this document shall apply at all times unless otherwise specified by the Department.

Section 5: Exceptions, Modifications and Conditions

A. Exceptions and Modifications

5.1 Request for Removal of Designated Uses: The Department shall consider scientifically reasonable requests for removal of designated uses that are not existing uses for all or part of specific waters of the State. A request for removal of designated uses shall be deemed a scientifically reasonable request if it demonstrates that it is based upon a sound scientific rationale, supported by substantial scientific and technical evidence and analysis, as to the existence of one or more of the factors listed below. If the Department finds any request for removal to be frivolous or to be flawed as to the methods used to obtain evidence or perform analysis to such an extent that the validity of the conclusions would be challenged by most persons trained and competent in the use and interpretation of the technical or scientific methods employed, it may dismiss such request for removal without further action. If the Department determines that a scientifically reasonable request has been made, it shall make a preliminary determination as to the proposed change and hold a public hearing in accordance with 7 Del. Code Section 6006. Removals of designated use completed under this Section are deemed to be duly adopted components of the State of Delaware Surface Water Quality Standards. The Department shall consider the following factors relative to requests for removal of designated uses that are not existing uses:

(a) Where concentrations of substances existing under natural conditions prevent the attainment of the designated use;

(b) Where lack of water from natural, ephemeral, intermittent or low flow conditions or water levels, inclusive of existing or proposed discharge flows, prevents the attainment of the designated use;

(c) Human-caused conditions or sources of pollution prevent the attainment of the designated use and cannot be remedied or would cause more net environmental damage to correct than to leave in place. Evaluations conducted pursuant to this factor shall take account of both short-term and long-term effects on the environment;

(d) Dams, diversions or other types of permitted or otherwise legal hydrologic modifications prevent the attainment of the designated use;

(e) Physical conditions related to the natural features of the water body, and related to water quality, that prevent attainment of the fish and aquatic life propagation designated use;

(f) Controls more stringent than those required by Sections 301 (b) and 306 of the Clean Water Act would result in substantial and widespread adverse economic and social impact.

5.2 Request for Modification of Water Quality Criteria: The Department shall consider scientifically reasonable requests for modification of water quality criteria contained herein for portions of specific waters of the State. A request for modification shall be deemed to be a scientifically reasonable request if it is based upon a sound rationale, and supported by substantial scientific evidence and analysis. This evidence and analysis must demonstrate the existence of site-specific differences in the chemical, physical, or biological characteristics of the surface water, and must propose alternate site-specific water quality criteria. Scientific studies for the development of these alternate criteria shall be designed and conducted in accordance with the guidelines set forth in the Water Quality Standards Handbook, (U.S. EPA, 1983) or other scientifically defensible methodologies approved by the Department. If the Department finds any request for modification to be frivolous, to be flawed as to the methods used to obtain evidence and to perform analysis to such an extent that the validity of the conclusions would be challenged by most persons trained and competent in the use and interpretation of the technical and scientific methods employed, or to contain reasonable evidence that a reduction in the number, quality, or river or stream mileage of designated uses would occur, it may dismiss such request for modification without further action. If the Department determines that a scientifically reasonable request has been made, the Department shall make a preliminary determination as to the proposed change and shall hold a public hearing in accordance with 7 Del. Code Section 6006. If the Department determines that a scientifically reasonable request has been made pursuant to this Section and such request could result in a change in discharge limits, then the public hearings for the discharge limitation change and the criteria modification shall be held concurrently. In such case, the Department shall provide separate public notices for the discharge limitation change and the criteria modification. Criteria modification completed under this Section are deemed to be duly adopted components of the State of Delaware Surface Water Quality Standards.

~~5.3 Exception for Pollutants in Facility's Intake Water: For the purpose of establishing discharge limitations, a facility shall not be deemed responsible for the exceedance of surface water quality criteria contained herein where the quality of a facility's intake water causes or would be expected to cause such exceedance in the receiving waters, provided that the discharger demonstrates, based upon sound rationale and supported by substantial scientific and technical evidence and analysis, that the following conditions (a) through (d), and (e) if applicable, exist:~~

~~(a) In the absence of pollutants in the facility's intake water, there would be no violation of the surface water quality criteria in the receiving waters; and~~

~~(b) No other activity, condition or method of operation, or materials used or produced at the facility which results in the introduction of pollutants into the facility's discharge significantly contributes to the violations of surface water quality criteria. Such activities, conditions or methods of operation, or materials used or produced at the facility include entrainment of pollutants previously discharged or disposed by the facility but exclude pollutants qualifying for exception under Section 5.4 hereof; and~~

~~(c) Upon statistically rigorous analysis of intake water and outfall data representative of various operating conditions and influences over time, no significant difference is found between the intake water concentrations/loadings and the outfall concentrations/loadings of pollutants for which violations of surface water quality criteria are noted; and~~

~~(d) No practicable alternative intake water of sufficient quality and quantity is available to the facility; and, if applicable~~

~~(e) Where a significant percentage of the discharged water is comprised of water purchased from a water utility, water pumped from wells, or water pumped from a stream basin different from that receiving the discharge, the facility must demonstrate that no adverse impact on designated uses may reasonably be expected to occur as a result of the discharge.~~

~~5.4 Exception for Pollutants Corroded and Eroded from Water Distribution Piping and Appurtenances: For the purpose of establishing discharge limitations, a facility shall not be deemed responsible for the exceedance of surface water quality criteria contained herein where normal corrosion and erosion associated with the facility's piping and appurtenances causes or would be expected to cause such exceedance in the receiving water, provided that the~~

~~discharger demonstrates, based upon sound rationale and supported by substantial scientific and technical evidence and analysis, all of the following:~~

~~(a) In the absence of pollutants corroded and eroded from the facility's water distribution piping and appurtenances, there would be no violation of the surface water quality criteria in the receiving water; and~~

~~(b) The normal corrosion and erosion associated with the intake water used by the facility is sufficient to cause the violation. For purposes of this determination, annual average intake water characteristics shall be used in assessing normal corrosion and erosion; and~~

~~(c) No other activity, condition or method of operation, or materials used or produced at the facility, which results in the addition to erosion and corrosion based pollutants into the facility's discharge, significantly contributes to the violations of surface water quality criteria in the receiving waters. Such activities, conditions or methods of operation, or materials used or produced at the facility include entrainment of pollutants previously discharged or disposed by the facility but exclude pollutants qualifying for exception under Section 5.3 hereof; and~~

~~(d) No practicable alternative water supply of statistically significant lower corrosivity or erosiveness is available to the facility; and~~

~~(e) No practicable alternative piping or appurtenances are available to the facility.~~

[5.4 Variance for Pollutants Corroded and Eroded from Water Distribution Piping and Appurtenances: For the purpose of establishing discharge limitations, a facility may be granted a variance from water quality criteria for pollutants contributed by normal corrosion and erosion associated with the facility's piping and appurtenances in situations where this corrosion and erosion causes or would be expected to cause exceedances in the receiving water, provided that the discharger demonstrates, based upon sound rationale and supported by substantial scientific and technical evidence and analysis, all of the following:

(a) In the absence of pollutants corroded and eroded from the facility's water distribution piping and appurtenances, there would be no violation of the surface water quality criteria in the receiving water; and

(b) The normal corrosion and erosion associated with the intake water used by the facility is sufficient to be the sole cause of the violation. For purposes of this determination, intake water characteristics shall be used in assessing normal corrosion and erosion; and

(c) No other activity, condition or method of operation, or materials used or produced at the facility, which results in the addition to erosion and corrosion based pollutants into the facility's discharge, significantly contributes to the violations of surface water quality criteria in the receiving waters. Such activities, conditions or methods of operation, or materials used or produced at the facility include entrainment of pollutants previously discharged or disposed by the facility; and

(d) No practicable alternative water supply or treatment methodology or system which would yield statistically significant lower corrosivity or erosiveness is available to the facility; and

(e) The discharger demonstrates that controls more stringent than technology-based limits and Section 306 of the Clean Water Act that would result in substantial and widespread economic and social impact. The analysis of economic impacts must demonstrate that:

(1) The discharger would face substantial financial impacts due to the costs of the necessary pollution controls or water treatment (substantial impacts of which would interfere with development), and

(2) The affected community will bear significant adverse impacts if the entity is required to meet existing or proposed water quality standards (widespread impacts of important development).

The discharger will be required to meet applicable criteria for all other constituents. An alternative criteria will be derived for the erosion/corrosion-based pollutants based on intake water characteristics and properties of the facility's piping and appurtenances. A variance granted under this Section shall be effective for three years, or the life of the NPDES permit, and at the expiration of either time period, the discharger must either meet the criteria or make a new demonstration of unattainability and financial impact. Variances considered under this Section shall be subject to all applicable public participation requirements and shall be subject to review and approval by the U.S. Environmental Protection Agency.]

~~5.5 Temporary sources of pollution, including but not limited to stream or ditch installation, improvement, maintenance, or stabilization projects, dredge operations, and waste site remediation projects, may be permitted even if degradation may be expected to occur. Permission may be granted provided that the applicant can demonstrate that after a minimal period of time the number, quality, and river or stream mileage of designated uses, and the degree of attainment of water quality standards, will return or be restored to conditions equal to or better than those existing just prior to the temporary source of pollution.~~

B. Conditions

~~5.6 The Department shall consider the information and factors listed below in determining whether a discharge causes, has the reasonable potential to cause, or contributes to an excursion of the numeric criteria set forth in these standards. Furthermore, the development of discharge limitations based upon the listed numerical criteria, or the modification thereof, shall appropriately reflect these~~

~~factors.~~

~~(a) Readily available and existing physical, chemical, and biological data on the discharge and receiving water including, but not limited to, the ambient background concentration of pollutants in the receiving water and the documented condition of the natural species community in the receiving water;~~

~~(b) The relative contribution of point and nonpoint sources of pollution;~~

~~(c) Instream dilution and dispersion of the discharged pollutant(s) in the receiving water;~~

~~(d) Variability of the pollutant(s) in the discharge;~~

~~(e) Fate mechanisms of discharged pollutants within the receiving water including, but not limited to, volatilization, photolysis, hydrolysis, sedimentation, and biodegradation;~~

~~(f) Bioavailability of the discharged pollutant(s) in the receiving water as well as synergistic or antagonistic interactions; and~~

~~(g) Analytical detectability of the pollutant(s) in the discharge. Where information is available which shows that reliable quantification at concentrations less than the criteria contained herein using analytical methods required by permit, regulation, or otherwise approved by the Department is not feasible, Minimum Analytical Levels (MAL) will be used as an interim measure by the Department to determine compliance with the criteria.~~

5.~~7~~3 **[7]** Any person who shall apply for a permit to discharge to the waters of the State shall have the opportunity to submit an analysis to the Department at the time of application to demonstrate that said discharge will not cause, have the reasonable potential to cause, or contribute to an excursion of the receiving stream's water quality standards. The Department shall consider any analysis submitted by the applicant and also conduct its own analysis in making a determination whether the discharge causes, has the reasonable potential to cause, or contributes to an excursion of standards. The Department's review of analyses submitted by applicants as well as analyses the Department conducts on its own shall consider the information and factors listed in Section 5.6 of these Standards. Analyses performed under Section 5.7 shall be conducted in concert with the requirements of Section 3, as applicable. A public hearing, pursuant to 7 Del. Code, Sections 6004 and 6006, may be held to gather public comment on any analysis submitted by an applicant in conjunction with Section 5.7.

5.~~8~~4 **[8]** Consistency with Other State and Federal Requirements: Nothing in Section 5 relieves or reduces the obligation of any person to comply with other applicable provisions of these Standards, federal or state laws and regulations.

Section 6: Regulatory Mixing Zones

The following requirements shall apply to regulatory mixing zones:

6.1 Applicability: In instances where the Department determines, based upon engineering calculations or field studies, that complete mix (as defined herein) of effluent with its receiving water is not expected to occur, the Department may allocate a designated portion of the receiving water to provide for mixing of the effluent and the receiving water. This area shall be defined as a regulatory mixing zone and shall be determined on a case-by-case basis taking into account critical flows, outfall configuration and receiving stream characteristics. A mixing zone will not be allocated in instances where the Department determines that complete mix of effluent and receiving water occurs at the point of discharge, in which case, the critical flows as provided in Section 8 shall be applied in determining if the applicable criteria are met.

6.2 Location: Regulatory mixing zones shall not impinge upon areas of special importance, including but not limited to drinking water supply intakes, nursery areas for aquatic life or waterfowl, approved or conditional shellfish areas, or heavily utilized primary contact recreation areas. Zones shall not be located in such a manner as to interfere with passage of fishes or other organisms. Shore-hugging plumes should be avoided to the maximum extent practicable. In areas where multiple discharges are located in proximity, overlapping discharge plumes may occur. In such instances, the size limitations derived under Section 6.4 may be reduced to preclude acute toxicity in the overlap areas, or to ensure an adequate zone of passage for fish.

6.3 Outfall Design: Outfalls shall be designed to provide maximum protection for humans, aquatic life, and wildlife. Surface discharges to shallow near-shore areas shall be discouraged in preference to submerged outfalls located in deep offshore areas or other alternative discharge configurations which achieve Water Quality Standards.

6.4 Size: Size of the zone shall be no larger than is necessary to provide for mixing of effluent and receiving water. The following are the maximum size limitations that shall apply:

(a) Mixing zones for non-thermal pollutants shall be designed as follows:

(i) Rivers: During critical stream flow, as detailed in Section 8 of these standards, the maximum distance to the edge of the mixing zone shall be described by:

$$x_m \leq (u\ W^2) / (6H \sqrt{g\ H\ S})$$

where x_m = maximum mixing zone length,

u = flow velocity for critical flow as detailed in Section 8.2© or Section 8.3,

W = width of river,
H = depth of river,
g = acceleration due to gravity, and
S = slope of river surface.

(ii) Lakes: Because of the shallow depth and small size of Delaware lakes, regulatory mixing zones shall be prohibited in these waters.

(iii) Tidal waters: For mean low water slack tide conditions, the maximum horizontal distance from the edge of the outfall structure to the edge of the mixing zone shall be no greater than twenty-five percent (25%) of the width of the tidal water at the point of discharge.

(b) Mixing zones for thermal (temperature) pollutants shall be defined as those waters between the point of discharge and the point at which the receiving water temperature criteria are met as defined in Section 11, subject to criteria (I) through (v) below. For non-tidal freshwater, mixing zones shall be designed using the critical stream flow specified in Section 8.1 or 8.3.

(i) The greatest offshore extension of the mixing zone shall not exceed 50 percent of the width of the waterbody at the point of discharge.

(ii) Thermal mixing zone cross-sectional area as measured in a vertical plane perpendicular to the receiving water flow shall not occupy more than 25 percent (25%) of the cross-sectional area of the receiving water as measured from the point of discharge to the opposite shore.

(iii) In areas where multiple discharges are located in proximity, overlapping discharges may occur. In such instances, the above size limitations shall apply to the cumulative influence of the multiple discharges.

(iv) Because of the shallow depth and small size of Delaware lakes, thermal mixing zones shall be prohibited in those waters.

(v) As an alternative to (b)(i) through (b) (iv) above, the size of the thermal mixing zone may be determined on a site-specific basis. This determination must be based upon a sound rationale and be supported by substantial biological, chemical, physical, and engineering evidence and analysis. Any such determination must show to the Department's satisfaction that no adverse changes in the protection and propagation of balanced indigenous populations of fish, aquatic life, and wildlife, may reasonably be expected to occur. A satisfactory showing made in conformance with Section 316(a) of the Water Quality Act of 1987 shall be deemed as compliance with the requirements of this paragraph.

6.5 In-Zone and Boundary of Zone Water Quality Requirements:

(a) Regulatory mixing zones shall not be used for, or considered as, a substitute for minimum treatment technology required by the Clean Water Act or other applicable State and Federal laws or regulations.

(b) Regulatory mixing zones shall be free of the following:

(i) Materials which result in the accumulation of toxic substances in sediment, aquatic life, or food chains at levels that may be harmful to the health of humans or aquatic life;

(ii) Materials in concentrations that may settle to form deposits which smother benthic organisms, may exert significant dissolved oxygen demand, or may create a nuisance condition;

(iii) Floating debris, oil, scum, foam, and other matter in concentrations that may cause a nuisance condition;

(iv) Substances in concentrations that produce color, odor, taste, or turbidity that may lead to significant disruption of public water supply treatment systems, or may cause a nuisance condition; or

(v) Substances in concentrations that may result in a dominance of nuisance species, or may affect species diversity.

(c) No acute aquatic life criterion, as detailed in Section 9 of this document, may be exceeded at any point greater than one-tenth of the distance from the edge of the outfall structure to the boundary of the regulatory mixing zone as defined above.

(d) No acute aquatic life criterion, as detailed in Section 9 of this document, may be exceeded at any point greater than fifty (50) times the discharge length scale in any horizontal direction from the edge of the outfall structure.

(e) No acute aquatic life criterion, as detailed in Section 9 of this document, may be exceeded at any point greater than five (5) times the average water depth in the regulatory mixing zone in any horizontal direction from the edge of the outfall structure.

(f) No chronic aquatic life criterion, as detailed in Section 9 of this document, may be exceeded beyond the boundary of the regulatory mixing zone as defined above.

Section 7: Nutrients

Nutrient overenrichment is recognized as a significant problem in some surface waters of the State. It shall be the policy of this Department to minimize nutrient input to surface waters from point and human induced non-point sources. The types of, and need for, nutrient controls shall be established on a site-specific basis. For lakes and ponds, controls shall be designed to eliminate overenrichment. For tidal portions of the stream basins of Indian River, Rehoboth Bay, and Little Assawoman Bay, controls needed to attain submerged aquatic vegetation growth season (approximately March 1 to October 31) average levels for dissolved inorganic nitrogen of 0.14 mg/L as N, for dissolved inorganic phosphorus of 0.01 mg/L as P, and for total suspended solids of 20 mg/L shall be instituted. The specific measures to be employed by existing NPDES facilities to meet the aforementioned criteria shall be as specified in

Section 11.5 (d) of these standards. Nutrient controls may include, but shall not be limited to, discharge limitations or institution of best management practices.

Section 8: Critical Flows

8.1 For all waters of the State, all water quality standards and criteria, except those for toxic substances, shall not apply at those times when the freshwater flow or net advective flow falls below that value that is equal to the flow of 7-day duration with recurrence interval of 10 years (generally known as the 7Q10 or the Q7-10). However, at all times all waters shall be free of materials and substances as listed in Section 6.5(b).

8.2. For all waters of the state, water quality criteria for toxic substances as specified in Section 9 shall not apply at those times when the freshwater or net advective flow falls below the following values:

(a) The harmonic mean flow ~~50th percentile, or median flow,~~ for compounds which bear the abbreviation "CA" for human carcinogen;

(b) The flow of 30-day duration with recurrence interval of 5 years (generally known as the 30Q5 or Q30-5), for compounds which bear the abbreviation "ST" for human systemic toxicant;

(c) The flow of 7-day duration with recurrence interval of 10 years (generally known as the 7Q10 or the Q7-10), for compounds having a chronic toxicity criterion; and

(d) The flow of 1-day duration with recurrence interval of 10 years (generally known as the 1Q10 or the Q1-10), for compounds having an acute toxicity criterion.

8.3. These critical flows shall also be used as design flows for developing water quality-based discharge limitations for the referenced groups of parameters. The Department shall consider scientifically reasonable requests for seasonally adjusted flows or the use of dynamic modeling techniques for this purpose on a case-by-case basis.

8.4. Nothing in Section 8 shall be construed as allowing any reduction in efficiency of, or suspension of, required pollution control practices, whether applied to point or nonpoint sources, during periods when flows are less than those specified for suspension of standards applicability in Sections 8.1-8.3.

Section 9: Toxic Substances

9.1 Applicability: Criteria set forth in this section apply to all surface waters of the State, except as provided in Section 6, Regulatory Mixing Zones, Section 8, Critical Flows, and Section 12, Criteria for Low Flow Waters.

9.2 General Provisions:

(a) Waters of the State shall not exhibit acute toxicity to fish, aquatic life, and wildlife, except in special cases applying to regulatory mixing zones as provided in Section 6.

(b) Waters of the State shall not exhibit chronic toxicity to fish, aquatic life, and wildlife, except in regulatory mixing zones as provided in Section 6, at flows less than critical flows as provided in Section 8, or in low flow waters as provided in Section 12.

(c) Waters of the State shall be maintained to prevent adverse toxic effects on human health resulting from ingestion of chemically contaminated aquatic organisms and drinking water.

(d) The Department may consider synergistic, antagonistic, and additive impacts of combinations of toxicants to fish, aquatic life, and wildlife, and human health in assessing aggregate environmental impacts and mandating point and nonpoint source controls.

9.3 Specific Numerical Criteria:

(a) Aquatic Life Criteria:

(i) Numerical criteria for the protection of aquatic life are established in Table 1 for all toxic substances for which adequate aquatic life toxicity information is available. All criteria for metals in Table 1 are in the total recoverable form, except as specifically footnoted for cyanide. For toxic substances where the relationship of toxicity is defined as a function of pH or hardness, numerical criteria are presented as an equation based on this relationship. Appropriate pH or hardness values for such criteria shall be determined on a case-by-case basis by the Department.

(ii) For toxic substances for which specific numerical criteria are not listed in Table 1, concentrations shall not exceed those which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 0.1 of LC_{50} values) to representative, sensitive aquatic organisms, except as provided in Section 6, Regulatory Mixing Zones, Section 8, Critical Flows, or Section 12, Criteria for Low Flow Waters. Concentrations so determined shall be applied as four-day average concentrations not to be exceeded more than once in any three-year period.

(b) Human Health Criteria

(i) Numerical criteria for the protection of human health are established in Table 2 for all toxic substances for which adequate toxicity information is available. Water quality criteria appearing in Table 2 for pollutants identified as carcinogens have been established at an upper bound worst case risk management level of one excess cancer in a population of one million (1×10^{-6}) over a 70 year lifetime. Criteria listed under the column header "Fish and Water Ingestion" apply only to surface waters of the State designated as Public Water Supply Sources in Section 10 of these Standards. Criteria listed under the column header "Fish/Shellfish Ingestion" apply only to marine surface waters of the State. Criteria listed under the column header "Fish Ingestion Only" apply to all fresh

surface waters of the State not designated as Public Water Supply sources in Section 10 of these Standards.

(ii) For compounds in Table 2 which are considered as both systemic toxicants and human carcinogens, criteria based on both human health concerns are presented. In determining pollution control requirements, the more stringent criterion, after consideration of critical (design) flows in Section 8, shall be utilized.

*** TABLES 1 & 2 ARE AT THE END OF THE PROPOSED REGULATION.**

Section 10. Stream Basins & Designated Uses

The designated uses applicable to the various stream basins represent the categories of beneficial use of waters of the state which must be maintained and protected through application of appropriate criteria.

*** THE CHART DESIGNATING STREAM BASINS & DESIGNATED USES AND FIGURE 1 ARE AT THE END OF THE PROPOSED REGULATION.**

Section 11: Surface Water Quality Criteria

11.1 General Criteria for Fresh Waters

The following criteria shall apply outside approved regulatory mixing zones unless otherwise specified:

INDICATOR	UNITS OF MEASURE	CRITERIA
Temperature	Fahrenheit Degrees	(a) Maximum increase above natural conditions shall be 5^{o}F. (b) No human-induced increase of the true daily mean temperature above 82^{o}F shall be allowed. (c) No human-induced increase of the daily maximum temperature above 86^{o}F shall be allowed. (d) The Department may mandate additional limitations on a site-specific or seasonal basis in order to provide incremental protection for early life stages of fish
Dissolved Oxygen	mg/L	(a) Average for the June-September period shall not be less than 5.5 mg/L ~~**[unless below this value due solely to natural conditions. When the average is below 5.5 mg/L due to natural conditions, the average shall not be lowered more than 0.5 mg/L due to human-induced changes.]**~~ (b) Minimum shall not be less than 4.0 mg/L ~~**[unless below this value due solely to natural conditions. When the minimum is below 4.0 mg/L due to natural conditions, the average shall not be lowered more than 0.5 mg/L due to human-induced changes.]**~~ ~~(c) In cases where natural conditions prevent attainment of these criteria, allowable reduction in dissolved oxygen levels as a result of human activities shall be determined through application of the requirements of Sections 3 and 5 of these Standards~~. **[(c) In cases where natural conditions prevent attainment of these criteria, allowable reduction in dissolved oxygen levels as a result of human activities shall be determined through application of the requirements of Sections 3 and 5 of these Standards.]** (d) The Department may mandate additional limitations on a site-specific or seasonal basis in order to provide incremental protection for early life stages of fish.
pH	Standard Units	(a) Shall be between 6.5 and 8.5 unless outside this range due solely to natural conditions. Where within this range, maximum human-induced change from background shall be 0.5 Standard Units; pH which results from human-induced change must remain within this range.

		(b) Where pH is below 6.5 or above 8.5 due solely to natural conditions, it shall not be lowered (where below 6.5) or raised (where above 8.5) more than 0.3 Standard Units due to human-induced changes.
Alkalinity	mg/L as CaCO3	Shall not be less than 20 mg/L unless due solely to natural conditions. If less than 20 mg/L due solely to natural conditions, no reduction due to human-induced changes is allowed.
Phenol	mg/L	Shall not exceed 0.3 mg/L.
4-chloro, 3-methylpheno	lmg/L	Shall not exceed 3.0 mg/L
2-chlorophenol	ug/L	Shall not exceed 0.1 ug/L
2,4-dichlorophenol	ug/L	Shall not exceed 0.3 ug/L
2,4-dimethylphenol	mg/L	Shall not exceed 0.4 mg/L
Pentachloro-phenol	mg/L	Shall not exceed 0.03 mg/L
Turbidity	Nephelometric or Formazin Turbidity Units	Shall not exceed natural levels by more than 10 units.

11.2 Additional Criteria for Other Fresh Water Designated Uses

(a) Public Water Supply

Streams with a designated use of public water supply shall provide waters of acceptable quality for use for drinking, culinary or food processing purposes after application of approved treatment equivalent to coagulation, filtration, and disinfection (with additional treatment as necessary to remove naturally occurring impurities). The untreated waters are subject to the following limitations:

(i) Waters shall be free from substances (except natural impurities) that, alone or in combination with other substances, result in:

(A) Unacceptable levels of taste or odor in the treated water;

(B) Significant disruption of the treatment processes at the treatment facility; or

(C) Concentrations of toxic substances in the treated water that may be harmful to human health. The requirements of Section 9 shall apply.

(b) Cold Water Fisheries (put-and-take)

The criteria given in this section shall apply only during that period of the year designated for put-and-take trout fishing for each stream (see Section 10). The following criteria shall apply outside approved regulatory mixing zones unless otherwise specified.

INDICATOR	UNITS OF MEASURE	CRITERIA
Temperature	Fahrenheit Degrees	(a) Maximum increase above natural conditions shall be 5^{o}F. (b) No human-induced increase of the true daily mean temperature above 75^{o}F, shall be allowed.
Dissolved Oxygen	mg/L	(a) Average shall not be less than 6.5 mg/L **[unless below this value due solely to natural conditions. When the average is below 6.5 mg/L due to natural conditions, no reduction due to human-induced change is allowed.]** (b) Minimum shall not be less than 5.0 mg/L **[unless below this value due solely to natural conditions. When the minimum is below 5.0 mg/L due to natural conditions, no reduction due to human-induced change is allowed.]**

11.3 General Criteria for Marine Waters

The following criteria shall apply outside approved regulatory mixing zones unless otherwise specified:

Temperature	Fahrenheit Degrees	(a) Maximum increase above natural conditions shall be 4^{o}F from October through May. Temperature rise during June through September shall be limited by the following conditions: (i) No human-induced increase of the true daily mean temperature above 84^{o}F shall be allowed; and (ii) No human- induced increase of the daily maximum temperature above 87^{o}F shall be allowed.

		(b) The Department may mandate additional limitations on a site-specific or seasonal basis in order to provide incremental protection for early life stages of fish.	pH	Standard Units	(a) Shall be between 6.5 and 8.5 unless outside this range due solely to natural conditions. Where within this range, maximum human-induced change from background shall be 0.5 Standard Units; pH which results from human-induced change must remain within this range. (b) Where pH is below 6.5 or above 8.5 due solely to natural conditions, it shall not be lowered (where below 6.5) or raised (where above 8.5) more than 0.3 Standard Units due to human-induced changes.
Dissolved Oxygen	mg/L	(a) Average for the June-September period shall not be less than 5.0 mg/L **[unless below this value due solely to natural conditions. When the average is below 5.0 mg/L due to natural conditions, the average shall not be lowered more than 0.5 mg/L due to human-induced changes.]** (b) Minimum shall not be less than 4.0 mg/L **[unless below this value due solely to natural conditions. When the minimum is below 4.0 mg/L due to natural conditions, the average shall not be lowered more than 0.5 mg/L due to human-induced changes.]** ~~(c) In cases where natural conditions prevent attainment of these criteria, allowable reduction in dissolved oxygen levels as a result of human activities shall be determined through application of the requirements of Sections 3 and 5 of these Standards.~~ **[(c) In cases where natural conditions prevent attainment of these criteria, allowable reduction in dissolved oxygen levels as a result of human activities shall be determined through application of the requirements of Sections 3 and 5 of these Standards.]** (d) The Department may mandate additional limitations on a site-specific or seasonal basis in order to provide incremental protection for early life stages of fish.	Alkalinity	mg/L as CaCO3	Shall not be less than 20 mg/L unless due solely to natural conditions. If less than 20 mg/L due solely to natural conditions, no reduction due to human-induced changes is allowed.
			Phenol	mg/L	Shall not exceed 0.3 mg/L.
			4-chloro, 3-methylphenol	mg/L	Shall not exceed 3.0 mg/L2
			2-chlorophenol	ug/L	Shall not exceed 0.1 ug/L
			2,4-dichlorophenol	ug/L	Shall not exceed 0.3 ug/L
			2,4-dimethylphenol	mg/L	Shall not exceed 0.4 mg/L
			Pentachlorophenol	mg/L	Shall not exceed 0.03 mg/L
			Turbidity	Nephelometric or Formazin Units	Shall not exceed n atural levels by more than 10 units.

11.4 Additional Criteria for Other Marine Water Designated Uses

(a) Harvestable shellfish waters (refer to Section 10)

Harvestable shellfish waters are waters from which shellfish may be taken and consumed; such waters are approved for shellfish harvesting by the State Board of Health. The following criteria shall apply:

INDICATOR	UNITS OF MEASURE	CRITERIA
Total coliform	MPN/100 mL	The coliform median MPN of the water shall not exceed 70/100 mL, nor shall more than 10% of the samples have an MPN in excess of 330/ 100 mL for a 3 decimal dilution test (or 230/100 mL where the 5 tube decimal test is used). These criteria shall be verified through sampling of those portions of the shellfish area most probably exposed to fecal contamination for those tidal and climatic conditions most likely to result in contamination of the shellfish area.

(b) Delaware River/Bay (PA-DE line, RM 78.8 to Cape Henlopen, RM 0.0)

The following criteria shall apply outside approved regulatory mixing zones unless otherwise specified.

Enterococcus Bacteria	Colonies/ 100mL	The geometric average of a representative group of samples ~~taken under conditions characterized by an absence of rainfall-induced runoff~~ shall not exceed 10/100mL.
Dissolved Oxygen	mg/L	(a) Minimum true daily mean shall not be less than 6.0 mg/L **[~~unless below this value due solely to natural conditions. When the average is below 6.0 mg/L due to natural conditions, the average shall not be lowered more than 0.5 mg/L due to human induced changes.~~]** ~~This~~ criterion shall apply from RM 59.5 to RM 0.0 only. (b) Minimum shall not be less than 5.0 mg/L **[~~unless below this value due solely to natural conditions. When the minimum is below 5.0 mg/L due to natural conditions, the average shall not be lowered more than 0.5 mg/L due to human induced changes.~~]** **[(c) In cases where natural conditions prevent attainment of these criteria, allowable reduction in dissolved oxygen levels as a result of human activities shall be determined through application of the requirements of Sections 3 and 5 of these Standards.]** ~~(c) In cases where natural conditions prevent attainment of these criteria, allowable reduction in dissolved oxygen levels as a result of human activities shall be determined through application of the requirements of Sections 3 and 5 of these Standards.~~ (d) The Department may mandate additional limitations on a site-specific or seasonal basis in order to provide incremental protection for early life stages of fish.
Temperature	Fahrenheit Degrees	(a) Maximum increase above natural conditions shall be 4^{o}F from October through May. Temperature rise during June through September shall be limited by the following conditions: (i) No human-induced increase of the true daily mean temperature above

		84°F shall be allowed; and (ii) No human induced increase of the daily maximum temperature above 86°F shall be allowed. (b) The Department may mandate additional limitations on a site-specific or seasonal basis in order to provide incremental protection for early life stages of fish.
(c) Lewes-Rehoboth Canal		
Dissolved Oxygen	mg/L	(a) Average for the June-September period shall not be less than 3.0 mg/L ~~[unless below this value due solely to natural conditions. When the average is below 3.0 mg/L due to natural conditions, the average shall not be lowered more than 0.25 mg/L due to human induced changes.]~~ (b) Minimum shall not be less than 2.0 mg/L ~~[unless below this value due solely to natural conditions. When the minimum is below 2.0 mg/L due to natural conditions, no reduction due to human induced change is allowed.]~~

11.5 Criteria for Waters of Exceptional Recreational or Ecological Significance (ERES Waters)

(a) General Policy

(i) Designated ERES waters shall be accorded a level of protection and monitoring in excess of that provided most other waters of the State. These waters are recognized as special natural assets of the State, and must be protected and enhanced for the benefit of present and future generations of Delawareans.

(ii) ERES waters shall be restored, to the maximum extent practicable, to their natural condition. To this end, the Department shall, through adoption of a pollution control strategy for each ERES stream basin, take appropriate action to cause the systematic control, reduction, or removal of existing pollution sources, and the diversion of new pollution sources, away from ERES waters.

(iii) Discharges to ERES waters shall be avoided to the maximum extent practicable. In order to be permitted, a discharge must be the least environmentally damaging practicable alternative.

(iv) Prior to any public notice for a discharge permit required pursuant to 7 Del. Code Chapter 60, the Department shall make a determination that potential impacts have been avoided to the maximum extent practicable, and that remaining unavoidable impacts will be minimized to the extent appropriate and practicable. Findings shall be based upon appropriate factual determinations, evaluations, and tests with special emphasis on the persistence and permanence of the impacts. Under this provision impacts considered individually or collectively include:

(A) Impacts of pollutants on human health and welfare;

(B) Impacts of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems including, but not limited to, the transfer, concentration, and spread of pollutants or their by-products through biological, physical, and chemical processes;

(C) Impacts of pollutants on aquatic ecosystem diversity, productivity, and stability. Such impacts may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or

(D) Impacts on recreational, aesthetic, and economic values.

(v) Any applicant for a discharge permit required pursuant to 7 Del. Code Chapter 60 shall provide to the Department, as part of a complete application, a resource assessment tailored to the site performed by qualified professionals. Such assessments shall fully consider ecological functions and values in light of the policies set forth in these standards. Consideration shall be given to:

(A) Potential impacts on physical and chemical characteristics of the aquatic ecosystems which shall include, but not be limited to, substrates, substrate particulates/turbidity, water, current patterns, water circulation, normal water fluctuations, and salinity gradients;

(B) Potential impacts on biological characteristics of the aquatic ecosystem which shall include, but not be limited to, fish, crustaceans, mollusks and other organisms in the food web, other wildlife, and threatened or endangered species; and

(C) Potential effects on human use characteristics which shall include, but not be limited to, water supplies, recreational and commercial fisheries, water related recreation, aesthetics, parks, research sites, wildlife areas or public access areas.

(b) General Provisions

(i) In cases where natural conditions prevent attainment of applicable fresh or marine dissolved oxygen criteria, reduction in dissolved oxygen levels as a result of human activities shall be prohibited.

(ii) All point, and human induced nonpoint sources subject to control through use of best management practices or otherwise, shall be required to remove nutrients to the extent necessary to prevent excessive growth of photosynthetic organisms.

(iii) All point, and human induced nonpoint sources subject to control through use of best management practices or otherwise, shall be required to remove particulate matter to the extent necessary to minimize turbidity.

(iv) ERES waters shall not exhibit toxicity within aquatic habitats commonly used by native or migratory aquatic, terrestrial, and avian species. Such habitats include, but may not be limited to, spawning sites, nursery areas, forage areas, and migratory pathways.

(v) ERES standards shall not apply in excavated waters. All other appropriate criteria shall remain in force for these waters.

(vi) The ERES criteria set forth in Section 11.5 supplement all other applicable requirements of these standards for ERES waters. Nothing in Section 11.5 relieves or reduces the obligation of any person to comply with other requirements of these Standards, federal or state laws and regulations.

(c) Pollution Prevention

(i) Existing Sources: For the purposes of this Section 11.5, an existing source shall be defined as a discharge for which a permit has been issued by the Department pursuant to 7 Del. Code Chapter 60 prior to January 1, 1991. In the case of a water body designated as ERES waters pursuant to Section 10 of the Standards, the Department shall not issue or reissue a permit for an existing source unless the applicant demonstrates a utilization of all economically feasible and reasonably available waste minimization practices and technologies, and the lack of feasible alternative production processes and disposal options.

The provisions of Subsections 11.5 (a)(iv), 11.5(a)(v), and 11.5 (c)(i) shall apply to existing sources on January 1, 1996, or upon adoption of a Pollution Control Strategy as provided in Section 11.5(d), whichever occurs first. In either event, the provisions of Section 11.5, including all requirements of the Pollution Control Strategy shall apply to existing sources.

(ii) Increased or New Sources: For the purposes of Section 11.5, new sources are those discharges for which a permit has not been issued pursuant to 7 Del. Code Chapter 60 prior to January 1, 1991, and increased sources are those discharges for which there is an increase in the ~~mass loading of any~~ pollutant **[~~loading~~]** ~~of concern~~ **[of concern]** from any existing source. ~~For the purposes of Section 11.5, pollutants of concern are the following: oxygen-demanding substances (as may be measured by BOD and COD), nitrogen, phosphorous, bacteria, heat, and total suspended solids.~~ **[For the purposes of Section 11.5, pollutants of concern are the following: oxygen-demanding substances (as may be measured by BOD and COD), nitrogen, phosphorous, bacteria, heat, and total suspended solids.]** In the case of any waterbody designated as ERES waters pursuant to Section 10 of the Standards, the Department shall not issue or reissue a permit pursuant to 7 Del. Code Chapter 60 that allows an increase in or new source of pollutant loadings ~~of pollutants of concern~~ **[of pollutants of concern]-**unless the applicant demonstrates:

(A) A need to discharge based upon a showing of the full utilization of measures, processes, methods, systems or techniques to eliminate the discharge altogether or minimize waste loadings through process changes, substitution of materials, enclosure of systems or other modifications. This can be demonstrated through the full utilization of available waste minimization practices and technologies and the lack of feasible alternative production processes and disposal options; and

(B) That a proposed new discharge or any increase in loading of pollutants of concern of an existing discharge is consistent with the Pollution Control Strategy for the basin. Prior to adoption of a Pollution Control Strategy for a stream basin no increase in loadings of pollutants of concern shall be allowed to the stream basin from a surface water discharger unless the Secretary determines that:

(1) Such discharger offsets the increased surface water discharge of pollutants of concern within the stream basin to the maximum extent practicable in an acceptable manner;

(2) The increased loadings of pollutants of concern are necessary to prevent a substantial adverse economic or social impact at the community or regional level, and

(3) Water quality will be maintained to fully protect existing uses.

(d) Pollution Control Strategy

(i) For each stream basin designated as ERES waters pursuant to Section 10 of these standards, the Department shall develop a pollution control strategy. The strategy shall provide for the implementation of best management practices established pursuant to Subsection 11.5(e) of this section and shall include such additional requirements, measures, and practices as are necessary to:

(A) Prevent the violation of water quality standards;

(B) Protect all resources in the stream basin in a manner that allows for natural conditions to be

maintained or restored; and

(C) Assure the protection and propagation of a balanced, indigenous population of fish, shellfish, aquatic vegetation, and wildlife, and provide for recreational activities in and on the water.

(ii) The strategy pursuant to this subsection shall, at a minimum:

(A) Provide an assessment of the nature, degree, and extent of pollution to waters within such stream basin, in terms of point source and non-point source contribution;

(B) Identify the aspects of the stream basin which are important, unique, or sensitive from a recreational or ecological perspective;

(C) Establish such additional indicators and criteria that satisfy the general policy and provisions established for such stream basins;

(D) Identify the means by which ERES standards will be achieved;

(E) Delineate, where appropriate, the specific point source effluent limits, best management practices, and other controls that will be used to achieve water quality standards; and

(F) Indicate changes to be made to state plans for control of water pollution or resource management to assure implementation of the strategy.

(iii) The Department shall assure the opportunity for public participation in the development of the strategy required pursuant to this subsection and shall provide for public review and comment on the strategy in accordance with 7 Del. Code 6010.

(iv) The Department may, to the extent it deems appropriate, provide technical assistance to local governments in developing and implementing the strategy required pursuant to this subsection.

(v) The Department shall, to the extent it deems appropriate, pursue and coordinate implementation of any strategy developed pursuant to this subsection through priority application of its resources to ERES waters through its regulatory and non-regulatory programs.

(vi) The Department may, in accordance with 7 Del. Code 6010, adopt and require the use of specific combinations of methods, practices, and technologies which it deems to be most effective for controlling, reducing, or removing waste loadings to ERES waters. Such requirements shall be based upon the application of good engineering and environmental science practices and principles, achieve a high degree of reliability, and be appropriate for the categories of activity.

(e) Best Management Practices

The Department may adopt, pursuant to 7 Del. Code 6010, best management practices for selected sources of pollution to ERES waters. Best management practices identified by the Department pursuant to this subsection shall provide a standard for the control of the addition of pollutants which reflects the greatest degree of pollutant reduction achievable including, where practicable, a standard requiring no discharge of pollutants.

11.6 Criteria Governing Primary Contact Recreation

The criteria specified below are calculated using EPA's "Ambient Water Quality Criteria for Bacteria, 1986" (EPA 440/5-84-002, January, 1986). A statistically derived risk of highly credible swimming-associated gastroenteritis illness of 12.5 per 1000 swimmers (1.25%) has been utilized to calculate these criteria. The purpose of these criteria is to provide the Department with a basis to assess water quality trends and pollution control needs with regard to primary contact recreation in waters of the state. The criteria ~~are valid only under conditions characterized by the absence of rainfall-induced runoff, and~~ apply to enterococcus bacteria determined by the Department to be of human origin based on best scientific judgment using available information. Swimming in waters affected by runoff during runoff periods may present a risk of highly credible gastroenteritis illness in excess of 12.5 per 1000 swimmers, and is not recommended. The following criteria shall apply:

Enterococcus Bacteria Colonies/100mL

For all fresh waters of the state, the geometric average of a representative group of samples ~~taken under conditions characterized by the absence of rainfall-induced runoff~~ shall not exceed 100/100 mL.

Enterococcus Bacteria Colonies/100mL

For all marine waters of the state, the geometric average of a representative group of samples ~~taken under conditions characterized by an absence of rainfall-induced runoff~~ shall not exceed 10/100 mL.

Section 12: Criteria for Low Flow Waters

12.1 A low flow water is one in which the 7Q10 freshwater inflow is less than 0.1 cfs. The following criteria shall apply to discharges into low flow waters:

(a) Where information is available for the receiving water which indicates that, because of low flow, ~~absent the discharge,~~ it would not support designated uses, then numeric criteria shall not apply ~~at the point of discharge~~. The numeric criteria shall then apply at the closest downstream point where uses could reasonably be expected to occur ~~in the absence of the discharge as determined by the Department~~.

(b) The discharge shall not add:

(i) Materials which result in the accumulation of toxic substances in sediment, aquatic life or food chains at levels that may be harmful to the health of humans or aquatic life;

(ii) Materials in concentrations that may settle to form deposits which smother benthic organisms, may

exert significant dissolved oxygen demand, or may create a nuisance condition;

(iii) Floating debris, oil, scum, foam, and other matter in concentrations that may cause a nuisance condition;

(iv) Substances in concentrations that produce color, odor, taste or turbidity that may lead to significant disruption of a public water supply treatment systems, or may cause a nuisance condition; or

(v) Substances in concentrations that may result in a dominance of nuisance species, or may affect species diversity.

12.2 The applicant for discharge shall bear the burden of showing, to the satisfaction of the Department, that the provisions of 12.1 (a) and 12.1 (b) above are met.

12.3 Any application for new or increased discharge to a low flow water must include a thorough evaluation of alternate discharge configurations, including but not limited to water conservation, relocating the outfall to a more suitable location, conveying the wastewater to other available treatment facilities, or utilizing land treatment. Alternatives which do not include discharge must be used wherever technologically feasible and cost-effective (notwithstanding other requirements of these or other applicable regulations).

Section 13: Separability

Should any section, paragraph, or other part of this document be declared invalid for any reason, the remainder shall not be affected.

TABLE 1

WATER QUALITY CRITERIA FOR PROTECTION OF AQUATIC LIFE
(All Values Are Listed or Calculated in Micrograms Per Liter)

Parameter	Fresh Acute Criterion	Fresh Chronic Criterion	Marine Acute Criterion	Marine Chronic Criterion
Aldrin	3.0	–	1.3	--
Aluminu	750.	87.	--	--
Arsenic (III)	360.	190.	69.	36.
Cadmium	$e^{(1.128[\ln(Hd)]-3.828)}$	$e^{(0.7852[\ln(Hd)]-3.490)}$	43.	9.3
Chlordane	2.4	0.0043	0.09	0.004
Chlorine	19	11.	13	7.5
Chlorpyrifos (Dursban)	0.083	0.041	0.011	0.0056
Chromium (III)	$e^{(0.8190[\ln(Hd)]+3.688)}$	$e^{(0.8190[\ln(Hd)]+1.561)}$	–	--
Chromium (VI)	16.	11.	1,100.	50.
Copper	$e^{(0.9422[\ln(Hd)]-1.464)}$	$e^{(0.8545[\ln(Hd)]-1.465)}$	2.9	--
Cyanide[1]	22.	5.2	1.0	--
DDT and Metabolites	1.1	0.0010	0.13	0.0010
Demeton	–	0.10	--	0.10
Dieldrin	2.5	0.0019	0.71	0.0019
Endosulfan	0.22	0.056	0.034	0.0087
Endrin	0.18	0.0023	0.037	0.0023

Guthion	--	0.01	–	0.01
Heptachlor	0.52	0.0038	0.053	0.0036
Hexachlorocylclohex-ane	2.0	0.08	0.16	--
Iron	--	1000.	--	--
Lead	$e^{(1.273[\ln(Hd)]-1.460)}$	$e^{(1.273[\ln(Hd)]-4.705)}$	140.	5.6
Malathion	–	0.1	--	0.1
Mercury (II)	2.4	0.012	2.1	0.025
Methoxychlor	–	0.03	–	0.03
Mirex	--	0.001	–	0.001
Nickel	$e^{(0.8460[\ln(Hd)]+3.3612)}$	$e^{(0.8460[\ln(Hd)]+1.1645)}$	75.	8.3
Total PCBs	2.0	0.014	10	0.03
Parathion	0.065	0.013	--	--
Pentachlorophenol	$e^{[1.005(pH)-4.830]}$	$e^{[1.005(pH)-5.290]}$	13.	7.9
Selenium	20	5.0	300.	71.
Silver	$e^{(1.72[\ln(Hd)]-6.52)}$	0.12	2.3	--
Toxaphene	0.78	0.0002	0.21	0.0002
Zinc	$e^{(0.8473[\ln(Hd)]+0.8604)}$	$e^{(0.8473[\ln(Hd)]+0.7614)}$	95.	86.

Notes:

[1] Cyanide measured as free cyanide at the lowest pH occurring in the receiving water, or cyanide amenable to chlorination.

Specific numerical acute criteria as presented in this table are applied as one-hour average concentrations not to be exceeded more than once in any three-year period. Specific numerical chronic criteria as presented in this table are applied as four-day average concentrations not to be exceeded more than once in any three-year period.

ln = natural log base e

e = 2.71828

Hd = hardness is expressed as mg/L as $CaCO_3$

pH is expressed as Standard Units

Example calculation: Fresh acute criterion for silver at hardness of 50 mg/L. Criterion in ug/L = e raised to the [1.72 ln(50) - 6.52] power. This is equal to e to the 0.21 power, or 1.23 ug/L.

TABLE 2

WATER QUALITY CRITERIA FOR PROTECTION OF HUMAN HEALTH

(All Values Are Listed in Micrograms Per Liter Unless Noted Otherwise)

	Freshwater Fish Ingestion Only	Fish and Water Ingestion	Marine/Estuarine Fish/Shellfish Ingestion	Human Health
Acrolei	1.0 mg/L	360.	140.	ST
Acrylonitrile	0.83	0.06	0.12	CA

Aldrin	0.17 ng/L	0.16 ng/L	0.02 ng/L	CA
Aldrin	0.086	0.080	0.012	ST
Antimony	5.4 mg/L	14.	760.	ST
Arsenic**		50. (MCL)		CA
Barium**		1.0 mg/L (MCL)		ST
Benzene	89.	1.2	12.5	CA
Benzidine	0.67 ng/L	0.12 ng/L	0.09 ng/L	CA
Benzidine	460.	85.	64.	ST
Benzo (A) Pyrene (3,4 Benzopyrene)	0.037	0.0027	0.0053	CA
Beryllium	0.08	0.0038	0.011	CA
Beryllium	3.5 mg/L	170.	500.	ST
Bromoform (Tribromomethane)	266	5.6	37.4	CA
Bromoform (Tribromomethane)	34. mg/L	690.	4.7 mg/L	ST
Cadmium**		10.(MCL)		ST
Carbon Tetrachloride (Tetrachloromethane)	5.5	0.26	0.78	CA
Carbon Tetrachloride (Tetrachloromethane)	500.	23.	70.	ST
Chlordane	0.73 ng/L	0.72 ng/L	0.13 ng/L	CA
Chlordane	0.057	0.056	0.008	ST
Chlorobenzene	26.1 mg/L	680.	3.7 mg/L	ST
Chloroethyl Ether (Bis-2 Chloroalkyl Ether)	1.77	0.031	0.25	CA
Chloroform (Trichloromethane)	368.	5.7	52.	CA
Chloroform (Trichloromethane)	22. mg/L	340.	3.2 mg/L	ST
Chromium**		50. (MCL)		ST
Chromium (Hexavalent)	4.2 mg/L	170.	590.	ST
Chromium (Trivalent)	840. mg/L	34. mg/L	120. mg/L	ST
Cyanide	270. mg/L	700.	38. mg/L	ST
DDT and Metabolites	0.74 ng/L	0.73 ng/L	0.10 ng/L	CA
DDT and Metabolites	0.13	0.12	0.018	ST
Dibenzo (A,H) Anthracene Anthracene	0.037	0.0027	0.0053	CA
1,2 Dichlorobenzene	21.8 mg/L	2.8 mg/L	3.1 mg/L	ST

1,3 Dichlorobenzene	4.3 mg/L	410.	600.	ST
1,4 Dichlorobenzene**	24. mg/L	75. (MCL)	3.4 mg/L	ST
3,3 Dichlorobenzidine	0.025	0.011	0.0036	CA
1,2 Dichloroethane	123.	0.38	17.	CA
1,1 Dichloroethylene	4.	0.058	0.56	CA
1,1 Dichloroethylene	20. mg/L	310.	2.8 mg/L	ST
1,2 Trans-dichloroethylene	130. mg/L	700.	19. mg/L	ST
Dichloromethane	2.0	4.7	277.	CA
Dichloromethane	810. mg/L	2.1 mg/L	110 mg/L	ST
2,4 Dichlorophenoxyacetic acid (2,4-D)**		100. (MCL)		ST
1,3 Dichloropropene	392.	0.19	5.5	CA
1,3 Dichloropropene	2.0 mg/L	10.0	280.	ST
Dieldrin	0.18 ng/L	0.17 ng/L	0.025 ng/L	CA
Dieldrin	0.14	0.13	0.02	ST
Diethylphthalate	148. mg/L* mg/L*	24.0 mg/L	21.0 mg/L	ST
Dimethylphthalate	3,700. mg/L	320. mg/L	530. mg/L	ST
2, 4 Dinitrotoluene	96.	0.94	13.	CA
2, 4 Dinitrophenol	13.0 mg/L	70.	1.9 mg/L	ST
Dioxin (2,3,7,8-TCDD)	0 .000017 ng/L	0.000016 ng/L	0.0000024 ng/L	CA
1, 2 Diphenylhydrazine	0.68	0.041	0.095	CA
Endosulfan	2.5	1.0	0.35	ST
Endrin**	1.0	0.2 (MCL)	0.14	ST
Ethylbenzene	35. mg/L	3.2 mg/L	5.0 mg/L	ST
Fluoranthene	67.	50.	9.4	ST
Fluoride**		1.8 mg/L (MCL)		ST
Heptachlor	0.27 ng/L	0.26 ng/L	0 .037 ng/L	CA
Heptachlor	0.60	0.58	0.084	ST
Hexachloroethane	11.	2.	1.6	CA
Hexachloroethane	150.	29.	22.	ST
Hexachlorobenzene	0.88 ng/L	0.85 ng/L	0.12 ng/L	CA
Hexachlorobenzene	1.2	1.2	0.17	ST
Hexachlorobutadiene	62.1	0.44	8.7	CA
Hexachlorobutadiene	2.0 mg/L*	69.	1.3 mg/L	ST
Hexachlorocyclohexane (Gamma-Lindane)	0.08	0.02	0.011	CA

Hexachlorocyclohexane (Gamma-Lindane) **	31.	4.0 (MCL)	4.4	ST
Hexachlorocyclohexane (Alpha)	0.016	0.0041	0.0023	CA
Hexachlorocyclohexane (Beta)	0.058	0.014	0.0081	CA
Hexachlorocyclopentadie ne	1.8 mg/L*	240.	1.8 mg/L*	ST
Isophorone	500. mg/L	5.2 mg/L	71. mg/L	ST
Lead**		50.(MCL)		CA
Mercury** (Inorganic)	7.1	2.0 (MCL)	1.5	ST
Methoxychlor**		100.(MCL)		CA
Nickel	5.7 mg/L	620.	810.	ST
Nitrate-Nitrogen**		10. mg/L (MCL)		ST
Nitrobenzene	2.2 mg/L	17.0	320.	ST
Nitrosodimethylamine-N	10.	0.68 ng/L	1.4	CA
Nitrosodiphenylamine-N	20.	5.3	2.8	CA
Nitrosodipropylamine-N	35.	0.005	4.9	CA
PCBs (1242,1254,1221, 1232, 1248, 1260, 1016)	0.056 ng/L	0.055 ng/L	0.0079 ng/L	CA
(Bis-2) Ethyl Hexyl Phthalate	7.4	1.9	1.	CA
(Bis-2) Ethyl Hexyl Phthalate	400.*	400.*	290.	ST
Di-N-Butyl Phthalate	13. mg/L*	2.8 mg/L	2.1 mg/L	ST
Selenium**	1.1 mg/L	10. (MCL)	160.	ST
Silver**	0. mg/L	50. (MCL)	5.7 mg/L	ST
1,1,2,2 Tetrachloroethane	13.5	0.17	1.9	CA
Tetrachloroethylene	4.3 mg/L	320.	610.	ST
Thallium	60.	14.	8.4	ST
Toluene	370. mg/L	10. mg/L	52. mg/L	ST
Total Trihalomethanes**		100.(MCL)		CA
Toxaphene	0.93 ng/L	0.91 ng/L	0.13 ng/L	CA
1,2,4 Trichlorobenzene	19. mg/L	680.	2.7 mg/L	ST
1,1,1 Trichloroethane**	200. mg/L	200. (MCL)	28. mg/L	ST
1,1,2 Trichloroethane	52.5	0 .61	7.4	CA
1,1,2 Trichloroethane	11. mg/L	140.	1.5 mg/L	ST
Trichloroethylene	115.	3.1	16.	CA
2,4,6 Trichlorophenol	4.5	1.3	0.63	CA

2,4,5 Trichlorophenoxypro-pionic acid (2,4,5-TP-Sil-vex)**		10. (MCL)		ST
Vinyl Chloride	677.	2.1	95.	CA

NOTES:mg/L= milligrams per liter
ng/L = nanograms per liter
CA = carcinogen
ST = systemic toxicant

The columns labeled "Fish and Water Ingestion" shall apply only to waters of the State designated Public Water Supply sources in these standards.

The column labeled "Fish Ingestion Only" shall apply to all fresh waters of the State not designated Public Water Supply sources in this document.

The column labeled "Fish/Shellfish Ingestion" shall apply only to marine waters of the State.

* Calculated solubility of compound in water is less than criterion; therefore, solubility limit calculated at 25 ^{0} C and 1 atm is substituted.

** Values shown under header "Fish and Water Ingestion" are Primary Maximum Contaminant Levels (MCLs) as given in the State of Delaware Regulations Governing Public Drinking Water Systems as amended May 19, 1989.

Section 10. Stream Basins and Designated Areas

The designated uses applicable to the various stream basins represent the categories of beneficial use of waters of the state which must be maintained and protected through application of appropriate criteria.

Basins as illustrated in Figure 1.	Public Water Supply	Industrial Water Supply	Primary Contact Recreation	Secondary Contact Recreation	Fish, Aquatic Life & Wildlife**	Cold Water Fish (Put-and-Take)	Agricultural Water Supply	ERES Waters*	Harvestable Shellfish
1. Appoquinimink River	-	x	(a)x	x	x	-	(a)	-	-
2. Army Creek	-	-	-x	x	x	-	(a)	-	-
3. Atlantic Ocean	-	x	x	x	x	-	-	(m)	-
4. Blackbird Creek	-	x	(a)x	x	x	-	(a)	-	-
5. Brandywine Creek	(a)	x	(a)x	x	x	(b)	(a)	(h)	-
6. Broad Creek	-	x	x	x	x	-	(a)	x	-
7. Broadkill River (k)	-	x	(a)x	x	x	-	(a)	-	-
8. Buntings Branch	-	-	-x	x	x	-	x	-	-
9. Cedar Creek	-	x	(a)x	x	x	-	(a)	(d)	-
10. Chesapeake & Delaware Canal	-	x	-x	x	x	-	-	-	-
11. Chesapeake Drainage System	-	x	x	x	x	-	x	-	-
12. Choptank River	-	x	x	x	x	-	x	-	-
13. Christina River	(a)	x	(a)x	x	x	(c)	(a)	-	-
14. Dragon Run Creek	(a)	x	(a)x	x	x	-	(a)	-	-
15. Delaware Bay (l), (n)	-	x	x	x	x	-	-	(m)	(j)
16. Delaware River (l) ,(o)	-	x	x	x	x	-	-	-	-
17. Indian River	-	x	x	x	x	-	(a)	(d)	-
18. Indian River Bay	-	x	x	x	x	-	(a)	x	(j)
19. Iron Branch	-	x	(a)x	x	x	-	(a)	(d)	-
20. Leipsic River	-	x	(a)x	x	x	-	(a)	-	-
21. Lewes & Rehoboth Canal	-	x	x	x	x	-	-	-	-
22. Little Assawoman Bay	-	x	x	x	x	-	(a)	x	-
23. Little River	-	x	(a)x	x	x	-	(a)	-	-
24. Marshyhope Creek	-	x	x	x	x	-	x	-	-
25. Mispillion River	-	x	(a)x	x	x	-	(a)	-	-
26. Murderkill River	-	x	(a)x	x	x	-	(a)	-	-
27. Naamans Creek	-	x	(a)x	x	x	-	(a)	-	-
28. Nanticoke River	-	x	x	x	x	-	(a)	x	-
29. Pocomoke River	-	x	x	x	x	-	x	-	-
30. Red Clay Creek	x	x	x	x	x	(e)	x	-	-
31. Red Lion Creek	(a)(i)	x	(a)x	x	x	-	(a)	-	-
32. Rehoboth Bay	-	x	x	x	x	-	(a)	x	(j)
33. St. Jones River	-	x	(a)x	x	x	-	(a)	-	-
34. Shellpot Creek	-	x	(a)x	x	x	-	(a)	-	-
35. Smyrna River	-	x	(a)x	x	x	-	(a)	-	-
36. White Clay Creek	(a)	x	(a)x	x	x	(f)	(a)	(g)	-

(a) Designated use for freshwater segments only(b)Designated use from March 15 to June 30 on:

1. Beaver Run from PA/DE line to Brandywine.
2. Wilson Run Route 92 through Brandywine Creek State Park.

(c) Designated use from March 15 to June 30 on: Christina River from MD/DE line through Rittenhouse Park.

(d) Designated use for marine water segments only.

(e) Designated use year round on:Red Clay Creek from PA/DE line to the concrete bridge above Yorklyn

(f) Designated use year round on:

1. White Clay Creek from the PA/DE line to the dam at Curtis Paper.

Designated use from March 15 to June 30 on:

2. Mill Creek from Brackenville Road to Route 7.
3. Pike Creek from Route 72 to Henderson Road.

(g) Designated use from PA/DE line to the dam at Curtis Paper.

(h) Designated use from PA/DE line to Wilmington city line.

(i) Goal use - not currently attained.

(j) Parts of these waters are APPROVED shellfish harvesting areas. Information on areas where shellfish may be taken should be obtained from the Shellfish & Recreational Waters Branch, Watershed Assessment Section, Division of Water Resources, Department of Natural Resources and Environmental Control ~~Division of Public Health, Department of Health and Social Services, Dover, Delaware, or from Appendices to the Shellfish Regulations~~.

(k) Includes Primehook Creek watershed.

(l) Includes assorted minor watersheds not explicitly associated with any other designated stream basin.

(m) The specific portions of the Atlantic Ocean and the Delaware Bay for which the ERES designation shall apply shall be delineated in the Pollution Control Strategy developed for each of those waterbodies. The ERES designation for the Atlantic Ocean and the Delaware Bay does not include water explicitly associated with any other designated stream basis (e.g., Delaware Bay does not include St. Jones River).

(n) The Delaware Bay extends from River Mile 0.0 to 48.2 as shown on Figure 1.

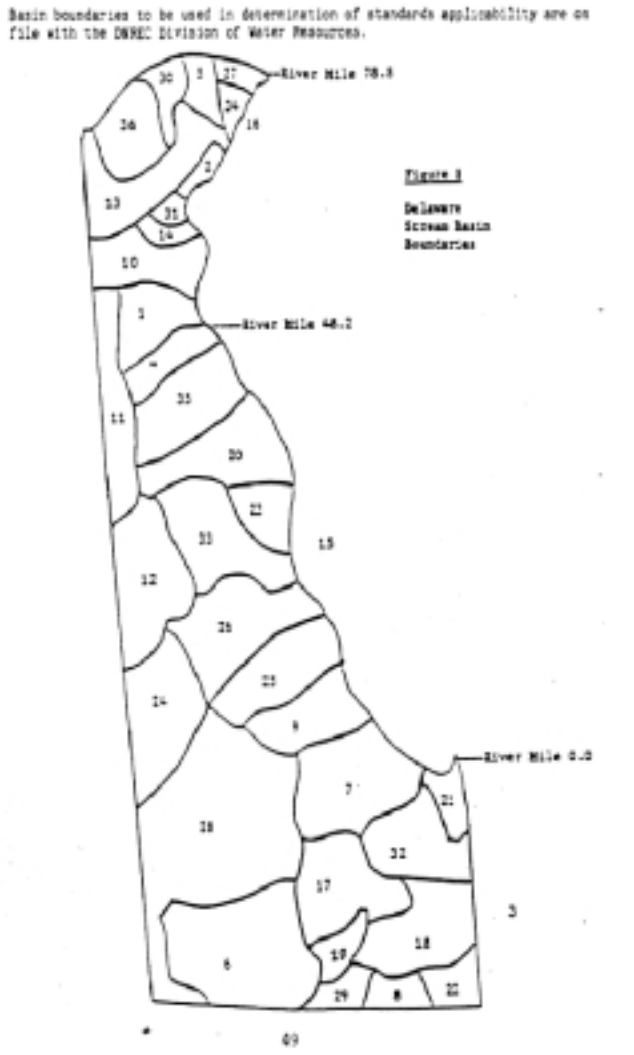
(o) The Delaware River extends from River Mile 48.2 to 78.8 as shown in Figure 1.

x this designated water use to be protected throughout entire stream basin

- water uses not designated in the stream basin

* waters of exceptional recreational or ecological significance

** includes shellfish propagation



BOARD/COMMISSION OFFICE	APPOINTEE	TERM OF OFFICE
Action Agenda Implementation Committee	Ms. Elizabeth Baxter	6/29/02
	Ms. Carol Fitzgerald	6/29/02
	Mr. J. Patrick Little	6/29/02
	Ms. Charlesa Lowell	6/29/02
	Mr. James Neal	6/29/02
Advisory Council for Mental Health Parity	Ms. Penny D. Chelucci	Pleasure of the Governor
	Ms. Patricia Preston-Tylee	Pleasure of the Governor
	Dr. Joseph C. Zingaro	Pleasure of the Governor
Board of Directors of the Greater Wilmington Convention & Visitors Bureau	The Honorable Darrell J. Minott	6/30/02
	The Honorable Joseph DiPinto	6/30/02
Board of Trustees of Delaware Technical and and Community College	Dr. Louis F. Owens, Jr.	6/15/02
	Mr. John M. Maiorano	6/17/02
	Ms. Suzanne C. Moore	6/17/02
Commission for the Purchase of Products and Services of the Blind and Other Severely Handicapped Individuals	Mr. Ronald W. Hill	Pleasure of the Governor
	Ms. Sandra A. Reyes	5/29/00
	Mr. Lester Smalls, Jr.	9/15/02
Committee on Disposition of Unmarked Human Burials	Mr. Ronald A. Thomas	7/01/00
Committee on Massage/Bodywork Practitioners	Mr. Daniel P. Stokes	10/21/01
Council on Aging and Adults with Physical Disabilities	Reverend Grace Ruth Batten	3/06/01
	Ms. Julia B. Gause	7/01/02
	Ms. Denise M. Tyler	7/01/02
Council on Alcoholism, Drug Abuse and Mental Health	Ms. Carla J. Markell	6/14/02
Council on Volunteer Services	Ms. Margaret E. Strine	7/03/01
Delaware State Board of Education	Ms. Mary B. Graham	7/15/05
	Dr. Claibourne D. Smith	7/15/05
Dental Hygiene Advisory Committee	Ms. Fay S. Rust	6/14/02
Family Court	Ms. Helen M. Richards, Commissioner	7/15/03
Foster Care Review Board	Ms. Alicia N. Clark	7/03/01
	Ms. Jane F. Fox	7/03/01
	Ms. Linda L. Hartzel	6/25/01
	Mr. James Kostelnik	6/25/01

BOARD/COMMISSION OFFICE	APPOINTEE	TERM OF OFFICE
Foster Care Review Board	Mr. William C. Miller	6/25/02
Human Relations Commission	Ms. Frann S. Anderson	3/27/01
	Mr. David Edelman	6/14/02
Justice of the Peace Court	The Honorable Patricia W. Griffin, Chief Magistrate	6/25/05
Justice of the Peace for Kent County	The Honorable Ernst Arndt	7/03/05
	The Honorable Ellis Parrott	7/15/05
	The Honorable Russell Thomas Rash	7/15/05
	The Honorable Robert Wall, Jr.	7/l5/05
Justice of the Peace for New Castle County	The Honorable Clarence Bennett	7/03/05
	The Honorable Wayne Hanby	7/03/05
	The Honorable Kathleen Lucas	7/15/05
	The Honorable Sean McCormick	7/15/05
	The Honorable Katharine Ross	7/15/05
	The Honorable Rosalie Rutkowski	7/15/05
	The Honorable David Skelley	7/15/05
	The Honorable Paul J. Smith	7/15/05
Justice of the Peace for Sussex County	The Honorable William Brittingham	7/03/05
	The Honorable Jeni Coffelt	7/03/05
	The Honorable Richard Comly, Jr.	7/03/05
	The Honorable Herman Hagan	7/03/05
Organ and Tissue Donor Awareness Board	Ms. Sharon L. Crivelli	7/15/02
	Mr. Jerome A. Emerson	7/15/02
	Dr. Marshall Schwartz	7/15/02
	Dr. Timothy Van Wave	7/15/02
	Ms. Linda C. Wolfe	7/15/02
Public Integrity Commission	Mr. Clifton H. Hubbard	8/29/02
State Board of Electrical Examiners	Mr. Ernest A. Derrick	7/12/02
State Board of Examiners of Psychologists	Dr. Sharon L. Mitchell	7/01/02
State Board of Veterinary Medicine	Dr. Sharon Alger-Little	6/14/02
State Coastal Zone Industrial Board	Mr. J. Paul Bell	7/03/04
	Ms. Christine M. Waisanen, Chairperson	7/03/04
Sussex County Board of Elections	Mr. Vaughn L. Callaway	6/29/03
	Ms. Elizabeth D. Elliott	6/29/03
	Mr. Gerald W. Pepper	6/29/03
Unemployment Insurance Appeals Board	Mr. William C. Eliason	6/17/05

BOARD/COMMISSION OFFICE	APPOINTEE	TERM OF OFFICE
Vocational Rehabilitation Advisory Council for the Division of the Visually Impaired	Mr. Mark A. Chamberlain	7/03/02
	Mr. Clifford T. Crouch	7/03/02
	Ms. Lynn C. Patts	7/03/02
	Ms. Sandra A. Reyes	7/03/02
	Ms. Darlene St. Peter	7/03/02
Workers Compensation Advisory Committee	Mr. Michael A. Begatto	4/21/01

DELAWARE RIVER BASIN COMMISSION

Amendments to the Commission's Ground Water Protected Area Regulations for Southeastern Pennsylvania

AGENCY: Delaware River Basin Commission.

ACTION: Final rule.

SUMMARY: At its June 23, 1999 business meeting, the Delaware River Basin Commission amended its Ground Water Protected Area Regulations for Southeastern Pennsylvania by the establishment of numerical withdrawal limits for 62 subbasins entirely or partially within the Protected Area.

EFFECTIVE DATE: June 23, 1999.

ADDRESS: Copies of the Commission's Ground Water Protected Area Regulations for Southeastern Pennsylvania are available from the Delaware River Basin Commission, P.O. Box 7360, West Trenton, New Jersey 08628.

FOR FURTHER INFORMATION CONTACT: Susan M. Weisman, Commission Secretary, Delaware River Basin Commission, (609) 883-9500 ext. 203.

SUPPLEMENTARY INFORMATION: On March 9, 1999 the Commission held public hearings on proposed amendments to its Ground Water Protected Area Regulations for Southeastern Pennsylvania as noticed in the Federal Register issues of January 12, 1999 and March 3, 1999; the Pennsylvania Bulletin issues of February 6, 1999 and March 6, 1999; the New Jersey Register of February 16, 1999, the New York State Register of January 20, 1999; and the Delaware Register of Regulations of February 1, 1999. The Commission has considered the extensive testimony and comments from interested parties and has prepared a "Response Document on Proposed Amendments to the Ground Water Protected Area Regulations for Southeastern Pennsylvania: May 1999" which is available upon request to Ms. Weisman at the number provided above.

The Commission's Ground Water Protected Area Regulations for Southeastern Pennsylvania are hereby amended as follows:

1. Subsection 6.i.(3) is hereby revised to read as follows:

(3) The potentially stressed levels and withdrawal limits for all delineated basins and subbasins are set forth below:

Neshaminy Creek Basin

Subbasin	Potentially Stressed (mgy)	Withdrawal Limit (mgy)
West Branch Neshaminy Creek Basin	1054	1405
Pine Run Basin	596	795
North Branch Neshaminy Creek	853	1131
Doylestown Subbasin Neshaminy Creek	710	946
Warwick Subbasin Neshaminy Creek	889	1185
Warrington Subbasin Little Nesharniny Creek	505	673
Park Creek Basin	582	776
Warminster Subbasin Little Neshaminy Creek	1016	1355
Mill Creek Basin	1174	1565
Northampton Subbasin Nesharniny Creek	596	794
Newtown Creek	298	397
Core Creek Basin	494	658
Ironworks Creek Basin	326	434
Lower Section Subbasin Neshaminy Creek	3026	4034

Schuylkill River Basin

Subbasin	Potentially Stressed (mgy)	Withdrawal Limit (mgy)
Hay Creek	974	1299
Lower Reach Manatawny-Ironstone Creek	1811	2414
Pigeon Creek	611	815
Schuylkill-Crow Creek	1157	1543
Schuylkill-Mingo Creek	671	895
Schuylkill-Plymouth-Mill Creeks	4446	5929
Schuylkill-Sixpenny Creek	1490	1987
Schuylkill-Sprogels Run	1091	1455
Schuylkill-Stony Creek	687	916
Schuylkill-Trout Creek	1082	1443
Stony Creek	1242	1655
Valley Creek	1865	2486

French and Pickering Creek Subbasins

Subbasin		
Lower Reach French Creek	634	845
Lower Reach Pickering Creek	1716	2288
Middle Reach French Creek	1608	2145
South Branch French Creek	1044	1393
Upper Reach French Creek	1295	1726
Upper Reach Pickering Creek	1358	1811

Perkiomen and Skippack Creek Subbasins

Subbasin		
East Branch Perkiomen-Indian Creeks	633	844
East Branch Perkiomen-Mill Creeks	720	961
East Branch Perkiomen-Morris Run	1214	1619
Hosensack-Indian Creeks	1257	1676
Lower Reach Skippack Creek	1069	1426

Perkiomen-Deep Creeks	1047	1396
Perkiomen-Lodal Creeks	1200	1600
Perkiomen-Macoby Creek	1252	1669
Swamp-Middle Creeks	1423	1898
Swamp-Minister Creeks	547	730
Swamp-Scioto Creeks	746	994
Towamencin Creek	466	622
Unami-Licking Creeks	992	1322
Unami-Ridge Valley Creeks	1068	1424
Upper Reach Perkiomen Creek	1223	1631
Upper Reach Skippack. Creek	813	1084
West Branch Perkiomen Creek	1566	2088

Delaware River Basin

Subbasin	Potentially Stressed (mgy)	Withdrawal Limit (mgy)
Jericho Creek	421	562
Mill Creek	1600	2134
Paunnacussing Creek	513	684
Pidcock Creek	563	751
Upper Reach Cobbs Creek	871	1161
Upper Reach Crum Creek	1290	1721
Upper Reach Darby Creek	1625	2167
Upper Reach East Branch Chester Creek	1865	2487
Upper Reach Frankford Creek	1414	1886
Upper Reach Poquessing Creek	1008	1344
Upper Reach Ridley Creek	1707	2275

Tohickon Subbasin

Subbasin		
Tohickon-Beaver-Morgan Creeks	1156	1541
Tohickon-Deep Run	956	1274
Tohickon-Geddes-Cabin Runs	602	803
Tohickon-Lake Nockamixon	556	741
Tohickon-Three Mile Run	726	968

Pennypack and Wissahickon Subbasins

Subbasin		
Lower Reach Wissahickon Creek	2750	3666
Upper Reach Wissahickon Creek	1302	1736
Middle Reach Pennypack Creek	1295	1727
Upper Reach Pennypack Creek	1358	1811

Brandywine Creek Subbasin

Subbasin		
East Branch Brandywine-Taylor Run	1054	1405
Middle Reach Brandywine Creek	823	1098
Upper Reach Brandywine Creek	1614	2153
West Branch Brandywine-Beaver Run	2110	2813
West Branch Brandywine-Broad Run	2380	3173
West Valley Creek	1673	2231

Lehigh Subbasin

Subbasin		
Upper Reach Saucon Creek	946	1262

* mgy means million gallons per year

Subject to public notice and hearing, this section may be updated or revised based upon new and evolving information on hydrology and streamflow and ground water monitoring or in accordance with (2).

2. This resolution shall become effective immediately.

Delaware River Basin Compact, 75 Stat. 688.

Susan M. Weisman
Secretary
June 24, 1999

PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE ADOPTION OF RULES AND REGULATIONS TO IMPLEMENT THE PROVISIONS OF 26 DEL. C. Ch. 10 RELATING TO THE CREATION OF A COMPETITIVE MARKET FOR RETAIL ELECTRIC SUPPLY SERVICE (OPENED APRIL 27, 1999) | PSC REGULATION DOCKET NO. 49

ORDER NO. 5166

AND NOW, this 13th day of July, A.D. 1999;

WHEREAS, the Electric Utility Restructuring Act of 1999 requires that every electric supplier providing electric supply service to Delaware-retail customers shall obtain a Certificate from the Commission; and

WHEREAS, the Commission has set up this docket to implement rules and regulations in order to facilitate the transition to the new competitive environment and to ensure that retail customers will be adequately informed and protected after the onset of customer choice; and

WHEREAS, retail choice begins for some customers as early as October 1, 1999, and Staff believes that it would be in the public interest to establish a process under which such a Certificate could be obtained on a interim provisional basis

well before customers become eligible to choose an electric supplier; and

WHEREAS, the parties to this proceeding have no objection to delegating to the Executive Director the authority to issue provisional certificates to applicants seeking to provide electric supply service to Delaware-retail customers for a limited period of time beginning immediately; and

WHEREAS, the Commission, after hearing the parties to this proceeding, has not received any protest concerning the Motion presented by staff requesting the Commission delegate to the Executive Director, for a limited time, the authority to grant provisional certificates to applicants seeking to provide electric supply service to Delaware-retail customers; now, therefore,

IT IS ORDERED:

1. That the Executive Director is hereby delegated with the authority to issue Provisional Certificates to applicants seeking to provide electric supply service to Delaware-retail customers beginning on this date and continuing without interruption until December 31, 1999.

2. That the requirements found in Exhibit "A" are hereby approved by the Commission on a temporary basis, subject to future revision or modification, and shall constitute the criteria upon which requests for provisional certification shall be reviewed and approved.

3. Any denial of a Provisional Certificate for the provision of electric supply service to Delaware-retail customers in the Delmarva service territory shall be immediately appealable to the Commission upon proper notice.

4. That the Commission reserves the jurisdiction and authority to enter such furthers Orders in this matter as may be deemed necessary or proper.

BY ORDER OF THE COMMISSION:

EXHIBIT "A"

PROVISIONAL CERTIFICATION OF ELECTRIC SUPPLIERS

All Electric Suppliers, as defined in the Electric Utility Restructuring Act of 1999, must obtain a Provisional Electric Supplier Certificate from the Commission to sell electric supply service or to arrange for the purchase on behalf of Retail Electric Customers prior to offering contracts to Customers or commencing service. A Provisional Electric Supplier Certification will be eligible for conversion to a regular certification pursuant to rules to be adopted by the Commission. Either provisional electric supplier certification or a regular electric supplier certification is required to be obtained from the Commission in order to sell electric supply service or to arrange the purchase on behalf of Retail Electric Customers prior to offering contracts to Customers or commencing service.

1. Certification Requirement. All Electric Suppliers shall file with the Executive Director an original and ten (10) copies of an Application for a Provisional Electric Supplier Certificate. Such application shall contain all the information and exhibits hereinafter required and may contain such additional information as the Applicant deems appropriate to demonstrate to the Executive Director that it possesses the technical, financial, managerial and operational ability to adequately serve the public.

Authority to Do Business In Delaware. Each Applicant shall provide documentation from the Delaware Secretary of State and/or the Delaware Division of Revenue that it is legally authorized and qualified to do business in the State of Delaware.

Resident Agent. Pursuant to 26 Del.C. §401, each Applicant shall file a designation in writing of the name and post-office address of a person resident within the State upon whom service of any notice, order, or process may be made. This information must be updated if changed.

Performance Bonds. Each Applicant shall submit a copy of their performance bond or guarantee that they have obtained as security to the Electric Distribution Company if required in the Service Agreement between the Applicant and the Electric Distribution Company.

Compliance with Regional Requirements. Each Applicant, except for Brokers, must demonstrate that it has the technical ability to secure generation or otherwise obtain and deliver electricity through compliance with all applicable requirements of PJM. Brokers must submit relevant evidence of technical fitness to conduct their proposed business. Any Broker arranging the purchase of Electric Supply Service for their Customers must procure electricity from an entity that complies with PJM's requirements.

Financial, Operational, Managerial and Technical Ability. Each Applicant shall be required to present substantial evidence supporting their financial, operational, managerial and technical ability to render service with the State of Delaware. Such evidence shall include, but is not limited to:

Certified financial statements current within twelve (12) months of the filing. Publicly traded Applicants must file their most recent annual report to shareholders and SEC Form 10-K. Other indicia of financial capability may also be filed.

Brief description of the nature of business being conducted, including types of customers to be served, services provided and geographic area in which services are to be provided.

A list of states in which Applicant or any of its affiliated interests is presently selling electric supply service to Retail Electric customers and a list of states in which Applicant or any of its affiliated interests has pending applications to sell electric supply service to Retail Electric customers.

A list of states in which Applicant or any of its affiliated interests has been denied approval by a State Commission to sell electricity to Retail Electric Customers or has had its authority revoked.

Relevant operational experience of each principal officer responsible for Delaware operations.

A copy of any FERC approval as a Marketer or date and docket number of the application to FERC.

If the Applicant requires deposits, advance payments, prepayments, financial guarantees or the like from customers, then the Applicant must secure a bond with corporate surety licensed to do business in Delaware guaranteeing the repayment of all customer deposits and advances upon the termination of service. The amount of the bond will be the lesser of (i) 150 percent of the projected amount of deposits and advances for the next one year period; or (ii) $50,000. If at any time the actual amount of the deposits and advances held by the Applicant exceeds the amount projected, the amount of bond shall be increased to comply with the requirement in the preceding sentence.

All new Applicants shall demonstrate in their applications that they possess a minimum of $100,000 of assets in excess of encumbrances or a minimum of $100,000 in cash, cash equivalents, or financial instruments that are reasonably liquid and readily available to meet their costs of providing electricity to Customers or any combination thereof.

Demonstration of cash or cash equivalents can be satisfied by the following:

(i) Cash or cash equivalents, including cashier's check, sight draft, performance bond proceeds, or traveler's checks;

(ii) Certificate of deposit or other liquid deposit, with a reputable bank or other financial institution;

(iii) Preferred stock proceeds or other corporate shareholder equity, provided that use is restricted to maintenance of working capital for a period of at least twelve (12) months beyond the provisional certification of the Applicant by the Executive Director;

(iv) Letter of credit, issued by a reputable bank or other financial institution, irrevocable for a period of at least twelve (12) months beyond the provisional certification of the Applicant by the Executive Director;

(v) Line of credit, issued by a reputable bank or other financial institution, irrevocable for a period of at least twelve (12) months beyond the provisional certification of the Applicant by the Executive Director;

(vi) Loan, issued by a qualified subsidiary, affiliate of Applicant, or a qualified corporation holding controlling interest in the Applicant, irrevocable for a period of at least twelve (12) months beyond the provisional certification of the Applicant by the Executive Director, and payable on an interest only basis for the same period;

(vii) Guarantee, issued by a corporation, copartnership, or other person or association, irrevocable for a period of at least twelve (12) months beyond the provisional certification of the Applicant by the Executive Director;

(viii) Guarantee, issued by a qualified subsidiary, affiliate of Applicant, or a qualified corporation holding controlling interests in the Applicant, irrevocable for a period of at least twelve (12) months beyond the provisional certification of the Applicant by the Executive Director; and,

(ix) Identifiable physical assets set forth in a balance sheet or similar statement.

(x) The Applicant shall disclose whether the entity or any of its affiliated interests has filed for bankruptcy in the past 24 months.

(xi) The Executive Director may consider any other information submitted by the Applicant if it can show the financial, operational, managerial, and technical abilities of an Applicant.

Verification of Application. The Application must be verified by a principal or officer of the Applicant.

Consent to the Jurisdiction. All Electric Suppliers shall consent to the jurisdiction of the Delaware courts for acts or omissions arising from their activities in the State.

Other Requirements:

Legal name as well as the name under which the Applicant proposes to do business in Delaware;

State of incorporation, business address, and address of the principal officer;

Name, title and telephone number of a regulatory contact person;

A toll-free telephone number of customer service department;

Description of the Applicant's experience in the energy market and a brief description of the services its plans to offer in Delaware and the type of customers it plans to serve; and

A statement detailing any criminal activities of which the Applicant or any of its affiliated interests has been charged or convicted, or which the principal or corporate

officers of the Applicant or any of its affiliated interests has been charged or convicted.

Notice. Each Applicant shall publish notice of the filing of the application in two (2) newspapers having general circulation throughout the State in a form to be prescribed by the Commission.

Application Fee. A non-refundable application fee of $750 shall be submitted with the application for Certification.

Incomplete or Abandoned Applications. Applications that do not include the necessary fees, supporting documentation or information may be rejected. The Executive Director will provide the Applicant with a list of deficiencies and the Applicant will be given time to provide the necessary information to complete its certification

Waiver of Certification Requirements. Upon the request of any Applicant, the Executive Director may, for good cause, waive any of the requirements of these Rules that a re not required by statute. The waiver may not be inconsistent with the purpose of these Rules or Chapter 10 of Title 26 of the Delaware Code.

DELAWARE STATE FIRE PREVENTION COMMISSION

NOTICE OF PUBLIC HEARING

The Delaware State Fire Prevention Commission will hold a hearing pursuant to 16 Del. C. §6603 and 29 Del. C. Ch. 101, to receive public comment regarding a proposed change to the State Fire Prevention Regulations. The Commission is proposing to amend the Ambulance Service Regulations as follows:

Add BLS Ambulance Provider/First Responder Section.

DATE, TIME AND PLACE OF PUBLIC HEARING

DATE: Tuesday, September 21, 1999
TIME: 9:00 AM and 7:00 PM
PLACE: Commission Chamber Delaware State Fire School
Delaware Fire Service Center, 1463 Chestnut Grove Road, Dover, Delaware 19904

Persons may view the proposed addition to the Regulations between the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday, at the Delaware State Fire Prevention Commission Office, Delaware Fire Service Center, 1463 Chestnut Grove Road, Dover, Delaware, 19904.

Persons may present their views in writing by mailing their views to the Commission at the above address prior to the hearing or by offering testimony at the public hearing. If the number of persons desiring to testify at the public hearing is large, the amount of time allotted to each speaker will be limited.

DEPARTMENT OF FINANCE

DIVISION OF REVENUE

DELAWARE STATE LOTTERY OFFICE

The Delaware State Lottery Office proposes to amend Delaware Lottery Rule 23 regarding the payment of prizes in the Lottery's Powerball game. The rule merely tracks a recent change in the operation of the Powerball game for the payment of prizes. The Lottery will receive written public comments from August 1, 1999 through August 30, 1999. Comments should be sent to Wayne Lemons, Director-Delaware Lottery, 1575 McKee Road, Suite 102, Dover, DE 19904-1903. Copies of the proposed rule can be obtained from the Lottery office at that address.

DEPARTMENT OF HEALTH AND SOCIAL SERVICES

DIVISION OF SOCIAL SERVICES

PUBLIC NOTICE

Medicaid / Medical Assistance Program

In compliance with the State's Administrative Procedures Act (APA - Title 29, Chapter 101 of the Delaware Code) and with 42CFR §447.205, and under the authority of Title 31 of the Delaware Code, Chapter 5, Section 505, the Delaware Department of Health and Social Services (DHSS) / Division of Social Services / Medicaid Program is amending its independent laboratory manual.

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, Medical Assistance Programs, Division of Social Services, P.O. Box 906, New Castle, DE 19720 by August 31, 1999.

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF AIR AND WASTE MANAGEMENT

AIR QUALITY MANAGEMENT SECTION

REGISTER NOTICE

1. TITLE OF THE REGULATIONS:

THE DELAWARE ON-ROAD MOBILE SOURCE EMISSIONS BUDGETS FOR THE DELAWARE PHASE II ATTAINMENT DEMONSTRATION: An Addendum to The Delaware Phase II Attainment Demonstration For The Philadelphia-Wilmington-Trenton Ozone Nonattainment Area

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:

In May 1998 the Delaware Department of Natural Resources and Environmental Control (DNREC) submitted to the U.S. Environmental Protection Agency (EPA) a document entitled "The Delaware Phase II Attainment Demonstration for Philadelphia-Wilmington-Trenton Ozone Nonattainment Area" ("The Phase II document"). The Phase II document successfully demonstrated attainment of the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for the Delaware portion of the Philadelphia-Wilmington-Trenton ozone nonattainment area (NAA).

Kent and New Castle counties are the two Delaware severe ozone nonattainment counties for which the modeled attainment demonstration is required by the 1990 Clean Air Act Amendments (CAAA). The attainment year for the severe ozone Philadelphia-Wilmington-Trenton NAA is year 2005. The Phase II document listed all the control measures utilized in the attainment demonstration, but did not list the on-road mobile source emissions budgets for the purposes of transportation conformity. Therefore, this addendum assigns the on-road mobile source emissions budgets for the Kent and New Castle county severe ozone NAA.

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:
August 26, 1999, 6:00 pm; DNREC Auditorium; 89 Kings Highway; Dover, DE 19901

7. PREPARED BY:
Alfred R. Deramo, Program Manager (302) 739-4791
Mohammed A. Mazeed, Environmental Engineer (302) 739-4791, July 13, 1999

DIVISION OF AIR AND WASTE MANAGEMENT
AIR QUALITY MANAGEMENT SECTION

REGISTER NOTICE

1. TITLE OF THE REGULATIONS:
Regulation 39 - NOx Budget Trading Program

2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE AND ISSUES:
The ambient air in Delaware does not meet the national ambient air quality standard (NAAQS) for the pollutant ozone. It has been determined that NOx, a pollutant that contributes to the formation of ozone, must be reduced in order for Delaware to support its Rate of Progress Plan and ozone attainment demonstration. The Department is herein finalizing a new regulation that requires boilers and indirect heat exchangers rated at 250 MMBTU/hr, or greater, heat input and electric generating units with an electrical output rating of 15 MW, or greater, to meet NOx emissions cap limitations that collectively reflect substantial reductions in NOx emissions. To aid industry in making the necessary reductions in a more cost effective manner, the regulation includes provisions that facilitate compliance through participation in a regional cap and trade program administered by the USEPA.

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: A public hearing on this regulation will be held on Tuesday, August 31, 1999, at 6:00 P.M. in the DNREC Auditorium, Richardson and Robbins Building, 89 Kings Highway, Dover, Delaware.

7. PREPARED BY:
Robert Clausen (302) 323-4542, July 14, 1999

DIVISION OF WATER RESOURCES

Total Maximum Daily Load (TMDL) for Zinc in the Red Clay Creek, Delaware

REGISTER NOTICE

Brief Synopsis of the Subject, Substance, and Issues

The Department of Natural Resources and Environmental Control (DNREC) is proposing to adopt a Total Maximum Daily Load (TMDL) Regulation for zinc in the Red Clay Creek. A TMDL sets a limit on the amount of a substance that can enter a water body while still assuring that applicable water quality standards are met and beneficial stream uses are protected. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties.

Possible Terms of the Agency Action

Following adoption of the proposed Total Maximum Daily Load for zinc in the Red Clay Creek, DNREC will

develop a Pollution Control Strategy (PCS) to achieve the necessary load reductions. The PCS will identify specific pollution reduction activities and timeframes and will be developed in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program.

Statutory Basis or Legal Authority to Act

The authority to develop a TMDL is provided by Title 7 of the Delaware Code, Chapter 60, and Section 303(d) of the Federal Clean Water Act, 33 U.S.C. 1251 et. seq., as amended.

Other Legislation That May Be Impacted

None

Notice of Public Comment

A public **workshop** will be held on Tuesday, September 7, 1999, between 3:00 and 4:00 p.m., at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware.

A public **hearing** will be held on Tuesday, September 7, 1999, between 7:00 and 8:00 p.m., also at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware. The hearing record will remain open until 4:30 p.m., September 15, 1999. Please bring written comments to the hearing or send them to Rod Thompson, Hearing Officer, DNREC, 89 Kings Highway, Dover, DE, 19901; facsimile: (302) 739- 6242. All written comments must be received by 4:30 p.m., September 15, 1999. For planning purposes, those individuals wishing to make oral comments at the public hearing are requested to notify Betty Turner, (302-739-4590; facsimile: (302) 739-6140; email: bturner@state.de.us) by 12:00 p.m., September 7, 1999.

Additional information and supporting technical documents may be obtained from the Watershed Assessment Section, Division of Water Resources, Department of Natural Resources and Environmental Control, Silver Lake Plaza – Suite 220, 820 Silver Lake Blvd, Dover, DE 19904-2464, (302) 739-4590, facsimile: (302) 739-6140.

Prepared By:

Richard Greene, Watershed Assessment Section, (302) 739-4590.

DIVISION OF WATER RESOURCES

Total Maximum Daily Load (TMDL) for Zinc in the White Clay Creek, Delaware

REGISTER NOTICE

Brief Synopsis of the Subject, Substance, and Issues

The Department of Natural Resources and Environmental Control (DNREC) is proposing to adopt a Total Maximum Daily Load (TMDL) Regulation for zinc in the White Clay Creek. A TMDL sets a limit on the amount of a substance that can enter a water body while still assuring that applicable water quality standards are met and beneficial stream uses are protected. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties.

Possible Terms of the Agency Action

Following adoption of the proposed Total Maximum Daily Load for zinc in the White Clay Creek, DNREC will develop a Pollution Control Strategy (PCS) to achieve the necessary load reductions. The PCS will identify specific pollution reduction activities and timeframes and will be developed in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program.

Statutory Basis or Legal Authority to Act

The authority to develop a TMDL is provided by Title 7 of the Delaware Code, Chapter 60, and Section 303(d) of the Federal Clean Water Act, 33 U.S.C. 1251 et. seq., as amended.

Other Legislation That May Be Impacted

None

Notice of Public Comment

A public **workshop** will be held on Tuesday, September 7, 1999, between 4:00 and 5:00 p.m., at the New Castle office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware.

A public **hearing** will be held on Tuesday, September 7, 1999, between 8:00 and 9:00 p.m., also at the New Castle

office of the Division of Air and Waste Management, Delaware Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware. The hearing record will remain open until 4:30 p.m., September 15, 1999. Please bring written comments to the hearing or send them to Rod Thompson, Hearing Officer, DNREC, 89 Kings Highway, Dover, DE, 19901; facsimile: (302) 739- 6242. All written comments must be received by 4:30 p.m., September 15, 1999. For planning purposes, those individuals wishing to make oral comments at the public hearing are requested to notify Betty Turner, (302-739-4590; facsimile: (302) 739-6140; email: bturner@state.de.us) by 12:00 p.m., September 7, 1999.

Additional information and supporting technical documents may be obtained from the Watershed Assessment Section, Division of Water Resources, Department of Natural Resources and Environmental Control, Silver Lake Plaza – Suite 220, 820 Silver Lake Blvd, Dover, DE 19904-2464, (302) 739-4590, facsimile: (302) 739-6140.

Prepared By:

Richard Greene, Watershed Assessment Section, (302) 739-4590.

DEPARTMENT OF EDUCATION

The Department of Education will hold its monthly meeting on Thursday, August 26, 1999 at 11:00 a.m. in the Townsend Building, Dover, Delaware.

DELAWARE RIVER BASIN COMMISSION

P.O. Box 7360 West Trenton

The Delaware River Basin Commission will meet on Wednesday, August 18, 1999, in West Trenton, New Jersey. For more information contact Susan M. Weisman at (609) 883-9500.

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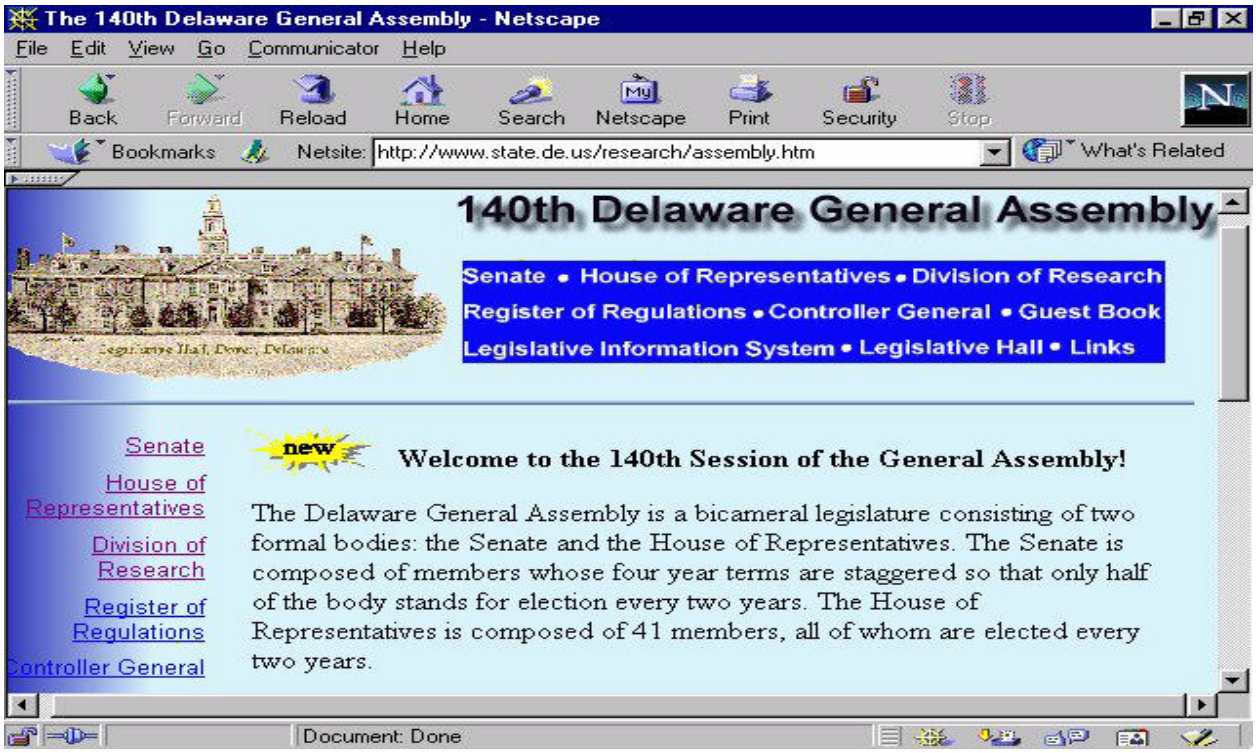

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Appendix "A"
NOx Budget Unit
Allowance Allocations

OPERATOR	PLANT	UNIT	1995 Heat Input (MMBTU)	1996 Heat Input (MMBTU)	1997 Heat Input (MMBTU)	NOx Emission Rate (lb/MMBTU)	Growth Factor 95-07	SIP Allocation	Base Allocation	Allocation Correction	Final Allocation
D-FD	MCKEE RUN	1	0	50446	87701	0.368	1.27	12	13	3	15
D-FD	MCKEE RUN	2	386706	59928	94926	0.368	1.27	14	44	9	53
D-FD	MCKEE RUN	3	1336784	957093	975350	0.150	1.27	91	87	17	104
D-FD	VAN SANT	1	61900	45590	51702	0.150	1.27	4	4	1	5
FIRST STATE	FIRST STATE	127	642482	331239	829483	0.614	1.27	129	226	45	271
CONECTIV	CHRISTIANA SUB	11	53397	11311	36300	0.698	1.27	1	3	1	4
CONECTIV	CHRISTIANA SUB	14	11246	14366	31318	0.680	1.27	1	2	0	2
CONECTIV	DELAWARE CITY	10	10909	1224	9918	0.698	1.27	1	4	1	4
CONECTIV	EDGE MOOR	3	2620203	2545577	2930860	0.150	1.27	242	208	42	250
CONECTIV	EDGE MOOR	4	3716664	4772838	4069197	0.150	1.27	455	332	66	398
CONECTIV	EDGE MOOR	5	6395496	6634821	5502246	0.150	1.27	632	489	98	586
CONECTIV	EDGE MOOR	10	12281	7497	9046	0.698	1.27	3	4	1	4
CONECTIV	MADISON STREET	10	8446	9916	5633	0.698	1.27	4	3	1	4
CONECTIV	WEST SUBSTATION	10	21369	3144	11613	0.698	1.27	1	6	1	7
CONECTIV	HAY ROAD	1	2731152	2836251	1523829	0.150	1.27	270	209	42	250
CONECTIV	HAY ROAD	2	2469198	2437794	993184	0.150	1.27	232	184	37	221
CONECTIV	HAY ROAD	3	596599	2684517	1343486	0.150	1.27	256	151	30	181

CONECTIV	INDIAN RIVER	1	2346108	1891753	1862828	0.150	1.27	180	159	32	191
CONECTIV	INDIAN RIVER	2	1738093	2176161	2226615	0.150	1.27	207	165	33	198
CONECTIV	INDIAN RIVER	3	3789624	3827660	4216963	0.150	1.27	365	302	60	362
CONECTIV	INDIAN RIVER	4	8304494	8250941	6635691	0.150	1.27	786	621	124	745
CONECTIV	INDIAN RIVER	10	29047	8190	29137	0.698	1.27	4	10	2	12
MOTIVA	DELAWARE CITY	2	999370	1171617	885034	0.170	1.21	105	92	24	116
MOTIVA	DELAWARE CITY	6	1199625	225185	0	0.170	1.21	284	61	15	76
MOTIVA	DELAWARE CITY	12	1573992	1241464	1460225	0.170	1.21	127	129	33	162
MOTIVA	DELAWARE CITY	19	99822	122522	0	0.170	1.21	5	9	3	12
MOTIVA	DELAWARE CITY	34	972922	1170960	1211669	0.170	1.21	37	101	26	127
MOTIVA	DELAWARE CITY	67	580001	513045	1623173	0.150	1.27	49	83	17	99
MOTIVA	DELAWARE CITY	68	1763569	1815736	1906781	0.150	1.27	173	140	28	167
MOTIVA	DELAWARE CITY	69	1858049	1903269	1828909	0.150	1.27	181	141	28	169
MOTIVA	DELAWARE CITY	70	1705279	1885544	1878741	0.150	1.27	180	141	28	169
MOTIVA	DELAWARE CITY	72	1264348	75863	0	0.170	1.21	121	57	15	72
MOTIVA	DELAWARE CITY	74	1292961	1297206	1455042	0.170	1.21	74	117	30	147
MOTIVA	DELAWARE CITY	105	0	0	774998	0.170	1.21	0	33	8	41

Note: For certain units the values for that unit s Base Allocation and Allocation Correction may not add up to the value identified for that unit as its Final Allocation due to rounding of the values in the individual columns. The values identified in the Final Allocation column are correct for those units.