The Department proposes to amend Regulation 24 by replacing Section 46, which is reserved, with the following. Section 46 does not change any of the other sections of Regulation 24.

Section 46 - Lightering Operations.
10/11/01

a. Applicability.

1. This Section applies to any person who owns or operates a service vessel that conducts lightering operations in the waters of the State, except as exempted in paragraph a.2. of this Section.

2. Any person performing emergency lightering shall be exempt from the requirements of this Section, provided that person submits to the Department a notice in accordance with paragraph h.3. of this Section. The volume transferred during emergency lightering shall be excluded from the volume of uncontrolled lightering operations determination in paragraph d.2.ii. of this Section.

3. Nothing in this Section shall be construed to require any act or omission that would violate any regulation or other requirement of the United States Coast Guard, or prevent any act that is necessary to secure the safety of a vessel or the safety of its passengers and crew.

4. The requirements of this Section are in addition to all other applicable State and Federal rules and regulations.

b. Definitions. As used in this Section, all terms not defined herein shall have the meaning given them in Regulation 1 or in Section 2 of this regulation.

"Baseline volume" means the average volume, in barrels per year, of volatile organic liquid lightered in the waters of the State during the two calendar years that immediately precede the effective date of this Section. The Department may allow the use of a different 2-year time period, within the five year period that precede the effective date, upon a determination that it is more representative of normal lightering operations.

"Emergency lightering" means the transfer of bulk liquid cargo to mitigate or prevent a cargo spill or to stabilize a vessel whose integrity has been compromised.

"Lightering" or "lightering operation" means the transferring of a volatile organic liquid from the cargo tank of a ship to be lightered (STBL) to the cargo tank of a service vessel.

"Liquid leak" means a leak of more than three drops per minute of volatile organic liquid.

"Marine tank vessel" means any tugboat, tanker, freighter, passenger ship, barge, boat, ship or watercraft, which is specifically constructed or converted to carry liquid bulk cargo in tanks.

"Ozone Action Day (OAD)" means a day that is predicted, based on forecasted weather conditions, to reach unhealthy ozone concentrations. Ozone Action Days are announced prior to 1430 hours for the following day.

"Service vessel" means the marine tank vessel that transports bulk liquid cargo between a facility and another vessel.

"Ship to be lightered (STBL)" means the marine tank vessel delivering the liquid cargo during lightering operations.

"Vapor balancing" means the transfer of vapors displaced by the incoming cargo from the tank of a vessel receiving cargo into a tank of the vessel or facility delivering cargo via a vapor collection system.

"Vapor collection system" means an arrangement of piping and hoses used to collect vapor emitted from a marine tank vessel's cargo tanks and to transport the vapor to a vapor processing unit.

"Vapor control system" means an arrangement of piping and equipment used to control vapor emissions collected from a marine tank vessel. It includes the vapor collection system and vapor processing unit. For the purposes of this Section, it, also, includes vapor balancing.

"Vapor leak" means a condition that exists when the reading on a portable hydrocarbon meter, measured 1 centimeter or less from any source, exceeds 10,000 parts per million, expressed as propane or butane, above background.

"Vapor processing unit" means the components of a vapor control system that recovers, destroys or disperses vapor collected from a vessel.

"Vapor tight" means a marine tank vessel has successfully demonstrated vapor tightness, as provided in paragraph f.1.iii. of this Section, within the preceding 12 months.

"Waters of the State" means those waters within the boundaries of the State, including the 12 mile circle described from New Castle and extended to the low water mark on the eastern side of the Delaware River and extending below the 12 mile circle with the middle of the shipping channel through the Delaware River and Bay and extending to the Atlantic Ocean and including those waters of the territorial sea which are in direct contact with the coast of Delaware, extending from the line of ordinary low water seaward for a distance of 3 geographical miles. This definition shall include any waters beyond the 3-mile mark as authorized by Federal Law.

c. Standards.

1. Each person subject to this Section shall comply with either paragraph c.1.i., c.1.ii. or c.1.iii. of this Section.

    i. Limit the VOC emissions from the service vessel to 5.7 grams per cubic meter (2 pounds per 1,000 barrels) of volatile organic liquid transferred.

ii. Reduce the VOC emissions from the service vessel by at least 95 percent by weight from uncontrolled conditions.

iii. Limit the VOC emissions from the service vessel by vapor balancing with STBLs equipped with a vapor collection system that is compatible with and connected to the vapor collection system of the service vessel.

2. Each person subject to this Section shall load volatile organic liquid only into service vessels that are vapor tight.

3. Each person subject to this Section shall ensure that the maximum operating pressure of the service vessel's vapor collection system shall not exceed 90 percent of the lowest pressure relief valve setting in the vapor collection system.

4. During each lightering operation, each person subject to this Section shall inspect the vapor control system of the associated service vessel for liquid and vapor leaks during the transfer of volatile organic liquid to that service vessel. For purposes of this paragraph, leak detection methods incorporating sight, sound or smell are acceptable. Whenever a leak is detected, the leak shall be tagged and recorded pursuant to paragraph g.3. of this Section. A first attempt at repair shall be made within 5 calendar days, with the leak repaired within 15 calendar days after the leak is detected or prior to the date that service vessel is loaded again, whichever date is later. Each person shall use the method approved in paragraph f.1.iii. to confirm the repair of all liquid and vapor leaks.

5. Beginning May 1, 2002, uncontrolled lightering operation shall be curtailed from 0230 hours until 1430 hours on any day that the Department declares an Ozone Action Day (OAD). If cargo transfer from a STBL to a service vessel begins prior to 1430 hours, that lightering operation may continue until 0230 hours or until the service vessel is fully loaded, whichever is later. If the Department declares a second OAD before 1430 hours of the first curtailment period, then such uncontrolled lightering shall be curtailed for an additional 24 hours until 1430 hours on the second day. If a third OAD in a row is declared, then uncontrolled lightering is permissible for a 12-hour period starting at 1430 hours on the second OAD and ending at 0230 hours on the third OAD. Uncontrolled lightering shall be curtailed from 0230 hours until 1430 hours on the third OAD. If the Department continues to declare OADs consecutively after the third day, the curtailment and loading pattern used for the third OAD shall apply.

6. Each person subject to this Section shall load volatile organic liquid into service vessels only using submerged fill.

d. <u>Compliance schedule.</u>

1. Not later than January 1, 2003, each person subject to this Section shall provide the following information to the Department:

i. The type(s) of vapor control system that will be installed on service vessels to comply with paragraph c.1. of this Section.

ii. The expected date(s) that the vapor control system(s) will be installed on service vessels.

2. Beginning May 1, 2005, each person subject to this Section shall fully comply with all requirements of this Section, except as exempted in paragraphs d.2.i. and d.2.ii. of this Section.

i. In compliance with the requirements of paragraphs c.1. through c.4. of this Section to the greatest extent practicable.

ii. The volume of uncontrolled lightering operations in the waters of the State between May 1 and September 30 of each year shall not exceed the maximum allowable volume, Vma, as determined using the following equation:

Vma = CF x BLV x (5/12)

where

Vma = the maximum allowable volume that can be lightered without controls in the waters of the State during the ozone season, barrels.

CF = a phased-in compliance factor. Beginning May 1st of the years 2005, 2008, 2012, 2016 and 2020, the phased-in compliance factor shall be 0.85, 0.75, 0.50, 0.25, and 0.05, respectively.

BLV = the baseline volume, barrels.

(5/12) = a factor to adjust annual volumes for the 5-month ozone season.

3. No later than May 1, 2004, and every four years thereafter, if needed, the Department and each person subject to this Section shall re-evaluate the feasibility of the compliance schedule in paragraph d.2. of this Section. The re-evaluations will be based, at minimum, on the current Delaware air quality and air quality planning needs, historical records gathered pursuant to paragraph g.7. of this Section, national and international standards and other maritime initiatives under development. If re-evaluation is not needed, the terms and conditions of this Section remain unchanged. Any changes to the requirements of paragraph d.2. shall be made in accordance with the requirements of Title 7 Delaware Code, Chapter 60.

e. Construction and operating permits. Any permit required, pursuant to Regulations 2, 25 or 30, shall be secured prior to commencing construction, as applicable. Operation of the vapor control system shall not commence until an operating permit is issued by the Department making all of the requirements of this Section federally enforceable, to include all standards, monitoring, testing, recordkeeping and reporting requirements.

f. Compliance demonstration.

1. Each person subject to this Section shall submit to the Department a compliance demonstration plan that shall include, at a minimum, the information specified in paragraphs f.1.i. through f.1.iv. of this Section.

    i. Performance test plan necessary to demonstrate initial compliance with the requirements of paragraph c. The performance test plan shall include, at minimum, the following:

        A. Operating conditions and sample location(s).

        B. Performance test equipment, procedures and logs.

        C. Test methods used.

        D. Number of test runs and sampling frequencies.

        E. Sample data sheets and calculations necessary to demonstrate initial compliance with the requirements of paragraph c.

    ii. Compliance monitoring plan necessary to demonstrate ongoing compliance with the requirements of paragraph c. The compliance monitoring plan shall include, at minimum, the following:

        A. Parameters to be monitored.

        B. Type of monitoring devices to be used.

        C. Type of data recording devices to be used.

        D. Sample location(s) and frequency.

        E. Quality assurance program.

        F. Operating and maintenance procedures and logs.

        G. Sample calculations.

    iii. Vapor tight test method(s) for the service vessel and the vapor recovery system.

    iv. Pollution prevention plan and monitoring procedures for all valves that if opened would allow VOCs to be emitted uncontrolled, either directly or indirectly, to the atmosphere.

2. Performance test equipment shall be prepared and installed as specified in the test methods approved by the Department in paragraph f.1.i.C.

3. A performance test of the vapor control system required to comply with paragraph c. of this Section shall be conducted within 180 days after the system is first operated. The Department shall be notified at least 60 working days prior to the conduct of any

performance test. The results of any performance test shall be submitted to the Department within 60 calendar days following the completion of the performance test.

g. Recordkeeping. Each person subject to this Section shall keep the records specified in this paragraph in a readily accessible location for at least 5 years. These records shall be made available to the Department immediately upon verbal or written request.

1. Records of information collected during all performance tests and all calculations used to demonstrate compliance with paragraph c. of this Section, as specified in the compliance demonstration plan approved by the Department in paragraph f.1. of this Section.

2. Records of information collected during all lightering operations and all calculations used demonstrate ongoing compliance, as specified in the compliance demonstration plan approved by the Department in paragraph f.1. of this Section. All periods of lightering operations where the monitored results exceeded the parameters established in the most recent performance test shall be highlighted.

3. Records of inspections conducted in accordance with paragraph c.4. of this Section.

4. Records of the pollution prevention monitoring conducted, as specified in paragraph f.1.iv.

5. Vapor tightness documentation for each service vessel used in lightering operations. The documentation shall include as a minimum the following:

i. Service vessel owner(s) name and address.

ii. Service vessel identification number.

iii. Date and location of test.

iv. Type of vapor tightness testing conducted.

v. Test results.

vi. Tester’s name and signature.

6. The operating and maintenance logs for the vapor collection system, vapor processing unit and monitoring equipment.

7. Beginning on January 1, 2002, each person complying with paragraph c.1.iii. of this Section shall develop and keep an ongoing database of STBLs lightered that would or would not be compatible for vapor balancing with each service vessel. This database shall include, at a minimum, all of the following information:

i. All of the information specified in paragraph g.8. of this Section.

ii. Name of the STBL.

iii. Country of registry.

iv. Whether or not the STBL had a vapor collection system and, if it did, whether or not the vapor collection system was compatible with the service vessel. If applicable, identify all of the specific areas of incompatibility.

v. Certification as to whether or not the emissions from that lightering operation were conducted in full compliance with the requirements of this Section.

8. Beginning on January 1, 2002, each person subject to this Section shall keep, at minimum, the following information for each lightering operation:

i. Name of the service vessel.

ii. Date and time that the lightering operation commenced and ended.

iii. Volume of volatile organic liquid lightered.

iv. The volume of volatile organic liquid lightered where the associated emissions were controlled in full compliance with the requirements of this Section.

h. Reporting requirements. Each person subject to this Section shall:

1. Comply with the initial compliance certification requirements of paragraph a. in Section 5 of Regulation 24.

2. Comply with the requirements of paragraph b. in Section 5 of Regulation 24 regarding excess emissions related to the vapor control system required to comply with this Section, as well as any other State of Delaware exceedance reporting requirements.

3. Submit to the Department within two (2) business days of the emergency lightering operation a description of the emergency, and the identity and telephone number of a person representing the entity requesting the emergency lightering operation.

4. Submit, not later than February 1st of each year, beginning in the year 2003, to the Department the information collected pursuant to paragraph g.7. of this Section for the previous calendar year, if complying with paragraph c.1.iii of this Section.