DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF AIR AND WASTE MANAGEMENT

Statutory Authority: 7 Delaware Code, Chapter 60 (7 Del.C. Ch. 60) 7 DE Admin. Code 1141

FINAL

Secretary's Order No.: 2010-A-0008

1141 Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products, Section 3.0, "Portable Fuel Containers"; and a Corresponding Revision to the Delaware State Implementation Plan (SIP) for Attainment of Ground-Level Ozone Standard

Date of Issuance: March 11, 2010 Effective Date of the Amendment: April 11, 2010

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") the following findings, reasons and conclusions are entered as an Order of the Secretary in the above-referenced rulemaking proceeding.

Background and Procedural History

This Order considers proposed regulatory amendments to 7 DE Admin. Code 1141, Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products, Section 3.0, "Portable Fuel Containers", and a corresponding revision to the Delaware State Implementation Plan (SIP) for attainment of ground-level ozone standard. The Department's Air Quality Management (AQM) Section of the Divisions of Air and Waste Management (DAWM) commenced the regulatory development process with Start Action Notice 2009-21. The Department published the proposed regulatory amendments in the December 1, 2009 *Delaware Register of Regulations* and held a public hearing on January 5, 2010¹. The Department's presiding hearing officer, Lisa A. Vest, prepared a Hearing Officer's Report dated February 26, 2010 (Report). The Report recommends certain findings and the adoption of the proposed Amendments as attached to the Report as Appendix A.

Findings and Discussion

I find that the proposed Amendments are well-supported by the record developed by the Department, and adopt the Report to the extent it is consistent with this Order. The Department's experts developed the record and drafted the proposed Amendments. Throughout the entire regulatory development process regarding this promulgation, the Department received no public comments, as noted in the Report.

I find that the Department's experts in the AQM Section of the DAWM fully developed the record to support adoption of these Amendments. With the adoption of this Order, Delaware regulations regarding portable fuel containers will no longer apply to portable fuel containers manufactured on and after January 1, 2009, but will be subject to regulation under Federal Rule 72 FR 8428. This change will enable Delaware to more efficiently and effectively reduce VOC emissions from portable fuel containers, as the Federal Rule provides for better VOC emission control of said containers, and therefore achieves greater VOC emission reductions than the previously existent Delaware regulation regarding this matter. Additionally, the Department's corresponding revision to

^{1.} A typographical error was made by the Delaware Register of Regulations when publishing the Register Notice for this proposed regulation in its Dec. 1, 2009 issue. Although the correct SAN number is 2009-21 as referenced above, it was incorrectly published by the Register as 2009-28 at that time. At the request of the Delaware Register of Regulations, this error is being noted at this time.

Delaware's State Implementation Plan (SIP) will demonstrate that this promulgation and the reliance on the Federal Rule will not adversely impact Delaware's efforts for attaining the ozone air quality standard.

In conclusion, the following findings and conclusions are entered:

1.) The Department has jurisdiction under its statutory authority to issue an Order adopting these proposed Amendments as final;

2.) The Department provided adequate public notice of the proposed Amendments, and provided the public with an adequate opportunity to comment on the proposed Amendments, including at a public hearing;

3.) The Department held a public hearing on January 5, 2010 on the proposed Amendments in order to consider public comments before making any final decision, however, no public comments were received either prior to or after said hearing date;

4.) The Department's Hearing Officer's Report, including its recommended record and the recommended Amendments as set forth in Appendix A, are adopted to provide additional reasons and findings for this Order;

5.) The recommended Amendments do not reflect any substantive changes from the proposed regulation Amendments as published in the December 1, 2009, *Delaware Register of Regulations*;

6.) The recommended Amendments should be adopted as final regulation Amendments because (1) Delaware will be enabled to more efficiently and effectively reduce VOC emissions from portable fuel containers, as Federal Rule 72 FR 8428 provides for better VOC emission control, and therefore achieves greater VOC emission reductions, of said containers than the previously existent Delaware regulation regarding this matter; (2) the Department's corresponding revision to Delaware's State Implementation Plan (SIP) will demonstrate that this promulgation and the reliance on the Federal Rule will not adversely impact Delaware's efforts for attaining the ozone air quality standard; and (3) the regulation amendments are well supported by documents in the record; and that

7.) The Department shall submit this Order approving the final regulation to the *Delaware Register of Regulations* for publication in its next available issue, and provide such other notice as the law and regulation require and the Department determines is appropriate.

Collin P. O'Mara, Secretary Delaware

State Implementation Plan Revision For Ozone National Ambient Air Quality Standard Revision to Air Regulation 1141 Section 3 Portable Fuel Containers

Submitted To U.S. Environmental Protection Agency Submitted By Delaware Department of Natural Resources and Environmental Control

April 2010

1. Introduction

In 2001, the Ozone Transport Commission (OTC) developed a model rule for its member states to control emission of volatile organic compounds (VOC) from portable fuel containers (Ref. 1). The 2001 model rule was based on the technical work conducted by California Air Resources Board (CARB) for developing California's 2000 fuel container rule (Ref. 2). As a member state of OTC, Delaware participated in the model rule development and implemented the model rule in Delaware as Section 3 of Regulation 41 (Ref. 3, and hereafter referred to as Sec. 3.0 of Reg. 1141, or Sec. 3.0 of 7 **DE Admin. Code** 1141). This regulation became effective in November 2001 with a compliance date of January 2003. Since the compliance date was after the 2002 base year for the 0.08 ppm ozone standard, Delaware included this regulation and its anticipated VOC emission reduction in the 2007 ozone state implementation plan (SIP) (Ref. 4).

After OTC developed its model rule in 2001, CARB realized that its original study and rule had some defects and decided to conduct further studies and research on fuel containers. Based on its new studies, CARB revised

its rule twice, in February 2006 and October 2006 (Ref. 5 and Ref. 6, respectively), to (1) include other containers (kerosene cans and utility jugs) that users tended to substitute for the portable fuel container covered by the original CARB rule, and (2) establish a certification program and set new standards for certification in order to improve spillage problems with the original container design. Thereafter, EPA developed a federal rule or "Control of Hazardous Air Pollutants from Mobile Sources" (37 FR 8428, February 26, 2007), which included, among other things, requirements for portable fuel containers equivalent to CARB's 2006 requirements. The federal requirements became effective on January 1, 2009, and set forth specific standards for manufacturers and importers of portable fuel containers, kerosene and diesel containers, and utility jugs.

Delaware has analyzed the aforementioned federal rule and determined that the federal rule has requirements more comprehensive than the current version of Sec. 3.0 of Reg. 1141. In addition, both CARB's 2006 rule and the federal requirements correct some errors and defects in CARB's 2000 rule, from which Delaware developed its Sec. 3.0 of Reg. 1141. With the federal rule in effect after January 2009, Delaware's portable fuel container regulation became unnecessary. Therefore, in a separate rulemaking process, Delaware is revising Sec. 3.0 of Reg. 1141 such that it does not apply to any portable fuel container manufactured on or after January 1, 2009.

This document is to revise Delaware's ozone SIP by demonstrating, under CAA Sec. 110(I), that the revisions to Sec. 3.0 of Reg. 1141 will not alter VOC emission reductions committed in Delaware's ozone SIP. Therefore, there will be no backsliding effect on Delaware's efforts for attaining the 0.08 ppm ozone standard.

Questions or comments regarding this SIP revision should be addressed to Frank Gao, Ph. D. and PE, Project Leader, Planning Branch, Air Quality Management Section, Delaware Department of Natural Resources and Environmental Control, at Frank.Gao@state.de.us.

2. Impact Analysis of Revision to Section 3 of Reg. 1141

2.1 Impact on Compliance Status

Section 3.1.3 of Reg. 1141 specifies that no portable fuel container or spout, or both portable fuel container and spout, that do not meet the requirements of Sec. 3.0 of Reg. 1141 may be sold, supplied or offered for sale in Delaware after January 1, 2003. For the containers and spouts manufactured before January 1, 2003, the compliance date was January 1, 2004. The requirements of Sec. 3.0 of Reg. 1141, including performance standards and testing procedures, are equivalent to those in CARB's 2000 rule.

The federal requirements, which are equivalent to those in CARB's 2006 rule and with improvements over those in CARB's 2000 rule and in Sec. 3.0 of Reg. 1141 (see 2.2 of this document for comparison), applies to fuel containers manufactured on and after January 1, 2009. In addition, the federal rule gives manufacturers and importers a 6-month sell-through period to clear any stock of containers manufactured before January 1, 2009. The federal compliance date and the sell-through requirement indicate that after July 1, 2009, no fuel container that does not comply with the federal requirements can be sold or imported for sale anywhere in the entire country, including Delaware.

2.2 Impact on Emission Reduction

Delaware inventoried VOC emission from the portable fuel containers in its 2002 ozone SIP base year inventory (Ref. 8). The 2002 state-wide VOC emission from this source was estimated 2.61 TPD in 2002. By implementing Sec. 3 of Reg. 1141, Delaware projected in its 2007 ozone SIP that the November 2001 portable container rule would reduce VOC emission from this source by 1.01 TPD from 2002 to 2009, which would contribute to the overall effort for attaining the 0.08 ppm ozone standard in 2009.

In January 2007, Delaware participated with other OTC states in developing a revised model rule for portable fuel container to aid the OTC states in attaining the 0.08 ppm ozone standard in 2009 (Ref. 9). The revised model rule was based on CARB's 2006 rules. Delaware included this model rule in its 2007 ozone SIP as a contingency measure and estimated a 0.10 TPD VOC reduction, in addition to the 1.01 TPD reduction from the November 2001 portable fuel container rule.

As aforementioned, Sec. 3.0 of Reg. 1141 was based on CARB's 2001 study and the resulting rule, while the 2007 OTC revised model rule was based on CARB's 2006 revised rules. The CARB's 2006 rules included two major improvements to its 2001 rule: (1) broadening the compliance scope by adding kerosene/diesel containers and utility jugs to the fuel container list, and (2) improving spout design to avoid malfunctions and operationdifficulty. From rule implementation perspectives, the first improvement can lead to an increase in rule penetration, while the second improvement can lead to an increase in rule effectiveness. Therefore, the CARB's revised 2006 rule can lead to an overall more efficient implementation, resulting in a greater VOC emission reduction. In its final rule (37 FR 8428), EPA explains that CARB's requirements in the revised 2006 rules are very similar to the requirements of the final federal rule. The EPA further concludes that, after the federal rule became effective, manufacturers are "able to meet both EPA and California requirements with the same container designs, resulting in equivalent emission reductions" (Ref. 10). According to EPA's judgment, Delaware believes that the VOC emission reductions in its 2007 ozone SIP based Sec. 3.0 of Reg. 1141 and based on OTC's 2007 model rule will be guaranteed to be the same by the requirements of the federal rule in 2009 and thereafter.

3. Conclusion

Based on the analysis in the previous section of this document, Delaware concludes that revising Sec. 3.0 of Reg. 1141, such that it applies only to portable fuel containers manufactured before January 1, 2009, will not have any adverse impact on Delaware's overall efforts for attaining the 0.08 ppm ozone standard in 2009 and maintaining the standard thereafter. Therefore, this SIP revision and its analysis meet the anti-backsliding provision of CAA Sec. 110(1).

References

1. OTC States' Approach to Achieving Emission Reductions in the Ozone Transport Region from Implementing Model Rules, Ozone Transport Commission, Washington, D.C., May 18, 2001.

2. California July 2000 rule: Final Regulation Order Portable Fuel Containers and Spouts, California Air Resources Board, Sacramento, CA, at http://www.arb.ca.gov/regact/spillcon/finregas.pdf.

3. 7 DE Admin. Code 1141 "Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products", Section 3.0 "Portable Fuel Containers", Effective November 11, 2001, Delaware Department of Natural Resources and Environmental Control, Dover, Delaware.

4. Delaware State Implementation Plan for Attainment of the 8-Hour Ozone National Ambient Air Quality Standard: Reasonable Further Progress and Attainment Demonstration, Delaware Department of Natural Resources and Environmental Control, Dover, Delaware, June, 2007.

5. California February 2006 amended rule: Final Regulation Order Portable Fuel Container Regulation, California Air Resources Board, Sacramento, CA, at http://www.arb.ca.gov/regact/pfc/2005/p2pro.pdf.

6. California October 2006 amended rule: Final Regulation Order Portable Fuel Container Regulation, California Air Resources Board, Sacramento, CA, at http://www.arb.ca.gov/regact/pfc/2005/frorev2.pdf.

7. Delaware State Implementation Plan: Administrative and Non-Substantive Changes in Regulations Governing the Control of Air Pollution, Delaware Department of Natural Resources and Environmental Control, Dover, Delaware, July 2008.

8. Delaware 2002 Ozone State Implementation Plan Base Year Emission Inventory for VOC, NOx and CO, Delaware Department of Natural Resources and Environmental Control, Dover, Delaware, June 2007.

9. Identification and Evaluation of Candidate Control Measures Technical Support Document (Final Draft), Prepared by MACTECH Federal Programs, Inc., for Ozone Transport Commission, Washington, D.C, February 2007.

10. Draft Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources, Office of Transportation and Air Quality, US EPA, EPA420-D-06-004, February 2006.

1141 Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products

(Break in Continuity of Sections)

11/11/2001 [xx/xx/2010 04/11/2010]

3.0 Portable Fuel Containers

- 3.1 Applicability.
 - 3.1.1 The provisions of 3.0 of this regulation apply to any person who sells, supplies, offers for sale, or manufactures for sale portable fuel container (or containers) or spout (or spouts) or both portable fuel container (or containers) and spout (or spouts) for use in the State of Delaware; except:
 - 3.1.1.1 Safety cans meeting the requirements of 29 CFR 1926, Subpart F.
 - 3.1.1.2 Portable fuel containers with a nominal capacity less than or equal to one quart.

- 3.1.1.3 Rapid refueling devices with nominal capacities greater than or equal to four gallons provided such devices are designed for use in officially sanctioned off-highway motorcycle competitions, and either create a leak-proof seal against a stock target fuel tank or are designed to operate in conjunction with a receiver permanently installed on the target fuel tank.
- 3.1.1.4 Portable fuel tanks manufactured specifically to deliver fuel through a hose attached between the portable fuel tank and an outboard engine for the purpose of operating that outboard engine.
- 3.1.2 Compliance with the requirements of 3.0 of this regulation does not exempt any spill-proof system or spill-proof spout from compliance with other applicable Federal or State requirements.
- 3.1.3 The requirements of 3.0 of this regulation apply on and after January 1, 2003, to any portable fuel container or spout or both portable fuel container and spout manufactured between before January 1, 2003 and December 31, 2008, inclusive, except that any portable fuel container or spout or both portable fuel container and spout manufactured before January 1, 2003 that does not meet the requirements of 3.0 of this regulation, may be sold, supplied, or offered for sale until January 1, 2004, provided that the date of manufacture or a date code, representing the date of manufacture, is clearly displayed on the portable fuel container or spout. Note: Portable fuel containers became regulated under federal regulation 37 FR 8428 effective January 1, 2009.
- 3.1.4 Any person subject to any requirement of 3.0 of this regulation may comply with an alternative control plan that has been approved by the Department and the U.S. EPA as part of Delaware's State Implementation Plan.
- 3.2 Definitions.

For the purpose of 3.0 of this regulation, the following definitions apply:

"Fuel" means a hydrocarbon mixture used to power any spark ignition internal combustion engine.

"**Manufacturer**" means any person who imports, manufactures, produces, assembles, packages, repackages, or re-labels a portable fuel container or spout or both portable fuel container and spout.

"**Nominal capacity**" means the volume, indicated by the manufacturer that represents the maximum recommended filling level.

"Outboard engine" means a spark-ignition marine engine that, when properly mounted on a marine watercraft in the operating position, houses the engine and drive unit external to the hull of the marine watercraft.

"**Permeation**" means the process by which individual fuel molecules may penetrate the walls and various assembly components of a portable fuel container directly to the outside ambient air.

"**Person**" means any individual, public or private corporation, political subdivision, government agency, department or bureau of the State, municipality, industry, co-partnership, association, firm, estate or any legal entity whatsoever.

"**Portable fuel container**" means any container or vessel with a nominal capacity of ten gallons or less that is intended for reuse and that is designed or used primarily for receiving, transporting, storing, and dispensing fuel.

"**Spill-proof spout**" means any spout that complies with all of the performance standards specified in 3.3.2 of this regulation.

"**Spill-proof system**" means any configuration of portable fuel container and firmly attached spout that complies with all of the performance standards in 3.3.1 of this regulation.

"Spout" means any device that can be firmly attached to a portable fuel container, through which the contents of a portable fuel container can be dispensed.

"Target fuel tank" means any receptacle that receives fuel from a portable fuel container.

- 3.3 Standards.
 - 3.3.1 No person subject to the requirements of 3.0 of this regulation shall sell, supply, offer for sale, or manufactures for sale portable fuel container (or containers) or spout (or spouts) or both portable fuel container (or containers) and spout (or spouts) for use in the State of Delaware which does not:

- 3.3.1.1 Have an automatic shut-off that stops the fuel flow before the target fuel tank overflows.
- 3.3.1.2 Automatically close and seal when removed from the target fuel tank, and remain completely closed when not dispensing fuel.
- 3.3.1.3 Have only one opening for both filling and pouring.
- 3.3.1.4 Provide a fuel flow rate and fill level of:
 - 3.3.1.4.1 not less than one-half gallon per minute for portable fuel containers with a nominal capacity of:
 - 3.3.1.4.1.1 less than or equal to 1.5 gallons and fills to a level less than or equal to one inch below the top of the target fuel tank opening; or
 - 3.3.1.4.1.2 greater than 1.5 gallons but less than or equal to 2.5 gallons and fills to a level less than or equal to one inch below the top of the target fuel tank opening if the spill-proof system clearly displays the phrase "Low Flow Rate" in type of 34 point or greater on each spill-proof system or label affixed thereto, and on the accompanying package, if any; or
 - 3.3.1.4.2 not less than one gallon per minute for portable fuel containers with a nominal capacity greater than 1.5 gallons but less than or equal to 2.5 gallons and fills to a level less than or equal to 1.25 inches below the top of the target fuel tank opening; or,
 - 3.3.1.4.3 not less than two gallons per minute for portable fuel containers with a nominal capacity greater than 2.5 gallons.
- 3.3.1.5 Meet a permeation rate of 0.4 grams per gallon per day or less.
- 3.3.1.6 Have a warranty from the manufacturer for a period of not less than one year against defects in materials and workmanship.
- 3.3.2 No person subject to the requirements of 3.0 of this regulation shall sell, supply, offer for sale, or manufacture for sale any spout for use in the State of Delaware, which does not:
 - 3.3.2.1 Have an automatic shut-off that stops the fuel flow before the target fuel tank overflows.
 - 3.3.2.2 Automatically close and seal when removed from the target fuel tank, and remain completely closed when not dispensing fuel.
 - 3.3.2.3 Provide a fuel flow rate and fill level of:
 - 3.3.2.3.1 not less than one-half gallon per minute for portable fuel containers with a nominal capacity of:
 - 3.3.2.3.1.1 less than or equal to 1.5 gallons and fills to a level less than or equal to one inch below the top of the target fuel tank opening; or,
 - 3.3.2.3.1.2 greater than 1.5 gallons but less than or equal to 2.5 gallons and fills to a level less than or equal to one inch below the top of the target fuel tank opening if the spill-proof spout clearly displays the phrase "Low Flow Rate" in type of 34 point or greater on the accompanying package, or for spill-proof spouts sold without packaging, on either the spill-proof spout or a label affixed thereto; or,
 - 3.3.2.3.2 not less than one gallon per minute for portable fuel containers with a nominal capacity greater than 1.5 gallons but less than or equal to 2.5 gallons and fills to a level less than or equal to 1.25 inches below the top of the target fuel tank opening; or,
 - 3.3.2.3.3 not less than two gallons per minute for portable fuel containers with a nominal capacity greater than 2.5 gallons.
 - 3.3.2.4 Have a warranty from the manufacturer for a period of not less than one year against defects in materials and workmanship.
- 3.4 Testing Procedures.

Any manufacturer subject to the requirements of 3.3 of this regulation shall perform the following compliance tests in accordance with test methods and procedures stated, or as otherwise approved by the Department and the Administrator of the EPA. Records of compliance testing shall be maintained for as long as the product is available for sale in Delaware, and test results shall be made available to the Department within 60 days of request.

- 3.4.1 The following tests shall be carried out to determine compliance with 3.3.2 of this regulation prior to the product being manufactured for sale in Delaware:
 - 3.4.1.1 "Test Method 510, Automatic Shut-Off Test Procedure for Spill-Proof Systems and Spill-Proof Spouts" adopted by California Air Resources Board (CARB) on July 6, 2000. This test method is hereby adopted by reference.
 - 3.4.1.2 "Test Method 511, Automatic Closure Test Procedure for Spill-Proof Systems and Spill-Proof Spouts" adopted by CARB on July 6, 2000. This test method is hereby adopted by reference.
 - 3.4.1.3 "Test Method 512, Determination of Fuel Flow Rate for Spill-Proof Systems and Spill-Proof Spouts" adopted by CARB on July 6, 2000. This test method is hereby adopted by reference.
- 3.4.2 The following tests shall be carried out to determine compliance with 3.3.1 of this regulation prior to the product being manufactured for sale:
 - 3.4.2.1 All of the test procedures stated in 3.4.1 of this regulation.
 - 3.4.2.2 "Test Method 513, Determination of Permeation Rate for Spill-Proof Systems," adopted by CARB on July 6, 2000. This test method is hereby adopted by reference.
- 3.5 Administrative Requirements.
 - 3.5.1 Any manufacturer subject to the requirements of 3.3.1 of this regulation shall clearly display on each spill-proof system:
 - 3.5.1.1 the phrase "Spill-Proof System";
 - a date of manufacture or representative date code; and
 - 3.5.1.3 a representative code identifying the portable fuel container or portable fuel container and spout as subject to and complying with the requirements of 3.3.1 of this regulation.
 - 3.5.2 Any person subject to the requirements of 3.3.2 of this regulation shall clearly display on the accompanying package, or for spill-proof spouts sold without packaging, on either the spill-proof spout or a label affixed thereto:
 - 3.5.2.1 the phrase "Spill-Proof Spout";
 - a date of manufacture or representative date code; and
 - 3.5.2.3 a representative code identifying the spout as subject to and complying with the requirements of 3.3.2 of this regulation.
 - 3.5.3 Any manufacturer subject to 3.5.1 or 3.5.2 or both 3.5.1 and 3.5.2 of this regulation shall file an explanation of both the date code and representative code with the Department prior to manufacturing the product for sale in the State of Delaware.
 - 3.5.4 Any person subject to 3.5.1 or 3.5.2 or both 3.5.1 and 3.5.2 of this regulation shall clearly display a fuel flow rate on each spill-proof system or spill-proof spout, or label affixed thereto, and on any accompanying package.
 - 3.5.5 Any person subject to 3.5.2 of this regulation shall clearly display the make, model number, and size of those portable fuel containers the spout is designed to accommodate.
 - 3.5.6 Any person not subject to or not in compliance with 3.3 of this regulation may not display the phrase "Spill-Proof System" or "Spill-Proof Spout" on the portable fuel container or spout, respectively, on any sticker or label affixed thereto, or on any accompanying package.
 - 3.5.7 Any person subject to and complying with 3.3 of this regulation, that due to its design or other features, cannot be used to refuel on-road motor vehicles shall clearly display the phrase "Not Intended For Refueling On-Road Motor Vehicles" in type of 34 point or greater on each of the following:
 - 3.5.7.1 For a portable fuel container or portable fuel container and spouts sold together as a spillproof system, on the system or on a label affixed thereto, and on the accompanying package, if any; and
 - 3.5.7.2 For a spill-proof spout sold separately from a spill-proof system, on either the spill-proof spout, or a label affixed thereto, and on the accompanying package, if any.

5 DE Reg. 1497 (01/01/02) 5 DE Reg. 1759 (03/01/02) 5 DE Reg. 1125 (11/01/02) 10 DE Reg. 868 (11/01/06) 12 DE Reg. 347 (09/01/08) 13 DE Reg. 1348 (04/01/10)