

## TITLE 2 - AGRICULTURE

### AGENCY 5 - DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

#### CHAPTER 480 - REGULATION GOVERNING THE OXYGENATION OF GASOLINE

Effective Date: November 1, 1996

##### **2VAC5-480-10. Definitions.**

The following words and terms, when used in this chapter, shall have the following meaning, unless the context clearly indicates otherwise:

"Administrator" means the Administrator of the United States Environmental Protection Agency." 1

"ASTM" means the American Society for Testing and Materials.

"Batch" means any discrete amount of gasoline.

"Blender" means any person who owns, leases, operates, controls, or supervises an oxygenate blending facility.

"Bulk gasoline plant operator" means any person who owns, leases, operates, or controls a plant which is a secondary distribution point for delivering gasoline to local farms, businesses, service stations, and other distribution points, where the total gasoline throughput is 20,000 gallons or less per working day, based on the daily average for the most recent 12-month period.

"Bulk gasoline terminal operator" means any person who owns, leases, operates, or controls a terminal which is a primary distribution point for delivering gasoline to bulk plants, service stations, and other distribution points, where the total gasoline throughput is greater than 20,000 gallons per working day, based on the daily average for the most recent 12-month period.

"Control area" means the Virginia counties within the Washington, D.C. Metropolitan Statistical Area (MSA) consisting of Arlington, Fairfax, Loudoun, Prince William, and Stafford; and the Virginia cities within the Washington, D.C. MSA consisting of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park.

"Control period" means a specified four months out of 12, beginning on November 1 of one year and continuing through the last day of February of the following year.

"Owner" means any person who owns or controls any batch of gasoline.

"Oxygenate" means any combustible substance or substances which, when added to gasoline, increases the amount of oxygen in that gasoline blend.

"Oxygenated gasoline" means gasoline which contains a measurable amount of oxygenate. 2

"Person" includes an individual, corporation, partnership, association, state, municipality, political subdivision of a state, and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof. 3

"Record" means any document which takes the form of, but is not limited to, a bill of lading, invoice, receipt, commodity manifest, or delivery ticket.

"Retail outlet operator" means any person who owns, leases, operates, or controls any establishment at which gasoline is sold or offered for sale to the ultimate consumer for use in a motor vehicle.

"Sell or transfer" means to sell, exchange, ship, receive, or to offer or expose for sale.

"Substantially similar" means "substantially similar" as stated in §211(f)(1) of the federal Clean Air Act, 42 USC §7545(f)(1).

"Terminal operator" means any person who owns, leases, operates or controls a gasoline terminal at which gasoline is sold or dispensed into trucks or other containers for transportation to retail outlets or wholesale purchaser-consumer facilities, and shall include, but not be limited to, any bulk gasoline plant operator and any bulk gasoline terminal operator.

"Ultimate consumer" means any person who purchases gasoline for any purpose other than resale.

"Wholesale purchaser-consumer" means any person who is an ultimate consumer of gasoline and who purchases or obtains gasoline from a supplier for use in motor vehicles and receives delivery of gasoline into a storage tank or other gasoline container.

"Wholesale purchaser-consumer facility" means any facility at which a wholesale purchaser-consumer stores gasoline in a storage tank or other gasoline container.

1 Clean Air Act §302(a), 42 USC §7602(a).

2 Proposed federal regulation as contained in Federal Register July 9, 1991. The placement of this definition as proposed in the Federal Register would be at 40 CFR §80.1 (oo).

3 Clean Air Act §302(e), 42 USC §7602(e).

## **2 VAC5-480-20. Applicability.**

A. This chapter shall:

1. Be enforced only at the commencement of the control period that begins at least 180 days after notice by the Commissioner of Agriculture and Consumer Services (commissioner) appears in The Virginia Register of Regulations, which notice shall state that the Director of the Department of Environmental Quality (director) has informed the commissioner that (because the air quality standard for carbon monoxide has been exceeded two or more times in a calendar year at any one of the air quality monitoring stations in the Metropolitan Washington, D.C.-Virginia-Maryland Statistical Area) the maintenance plan for the Northern Virginia area requires the enforcement of this chapter; and

2. Cease to be enforced when the conditions of subdivision A 1 of this section have occurred and the commissioner receives written notice from the director that enforcement of this chapter is no longer required to satisfy the maintenance plan. The commissioner shall publish this written notice in the Virginia Register of Regulations.

B. Nothing in this chapter shall apply to any person who sells or transfers any batch of gasoline for use in aircraft.

**2VAC5-480-30. Minimum oxygenate content.**

No person may sell or transfer gasoline to a retail outlet operator or wholesale purchaser-consumer who is within the control area during a control period unless the gasoline contains a minimum of 2.7% oxygen by weight as determined in accordance with 2VAC5-480-70 of this chapter.

**2VAC5-480-40. Nature of oxygenates.**

A. No person may sell or transfer gasoline to a retail outlet operator or wholesale purchaser-consumer located in the control area during a control period unless such gasoline contains an oxygenate which is:

1. Of the type and quality allowed under the federal Clean Air Act;
2. Of a type "substantially similar" under §211(f)(1) of the federal Clean Air Act, 42 USC §7545(f)(1); or
3. Approved through the waiver granted under §211(f)(4) of the federal Clean Air Act, 42 USC §7545(f)(4).

B. No person may sell or transfer to a retail outlet operator or wholesale purchaser-consumer located in the control area during a control period gasoline that exceeds the maximum oxygen content specified by the "substantially similar" definition of §211(f)(1) of the federal Clean Air

Act, 42 USC § 7545(f)(1), unless such gasoline is approved through the waiver ("the waiver") granted by the administrator under the authority of § 211(f)(4) of the federal Clean Air Act, 42 USC §7545(f)(1);

No person may sell or transfer to a retail outlet operator or wholesale purchaser-consumer located in the control area during the control period gasoline approved through the waiver unless the oxygen content of such gasoline is no more than that specified by the waiver.

C. No person may use any oxygenate unless it is "substantially similar" as defined by this chapter, or unless it is approved through the waiver.

### **2VAC5-480-50. Record keeping and transfer requirements.**

A. Any terminal operator who ships or cause s to have shipped gasoline to or within the control area during a control period shall make a record to be made no later than the time of shipment of the gasoline. Any person who ships the gasoline to or within the control area during a control period sha ll carry a copy of the record made by the terminal operator. The terminal operator shall retain for one year after the creation of the record or until this chapter ceases to have effect, whichever is the sooner, a copy of the record and shall make such record available for inspection by the commissioner. Such record shall contain for each batch of gasoline leaving the terminal operator:

1. The volume of gasoline;
2. The class of oxygenate in the gasoline, if any, that is to say whether the gasoline contains an ether or an alcohol based oxygenate;
3. The oxygen content, if any;
4. A declaration of whether the destination of the batch of gasoline leaving the terminal operator is within the control area or not; and
5. The name and address of the person to whom the terminal operator shipped the batch of gasoline and the date of such shipment.

B. Any blender who ships or causes to have shipped gasoline to or within the control area during a control period shall make a record, to be made no later than the time of shipment of the gasoline.

Any person who ships the gasoline to or within the control area during a control period shall carry a copy of the record made by the terminal operator. The blender shall retain for one year after the creation of the record or until this chapter ceases to have effect, whichever is the sooner, a copy of the record and shall make such record available for inspection by the commissioner. Such record shall contain for each batch of gasoline leaving the blender:

1. The volume of gasoline;
2. The class of oxygenate in the gasoline, if any, that is to say whether the gasoline contains an ether or an alcohol based oxygenate;
3. The oxygen content, if any;
4. A declaration of whether the destination of the batch of gasoline leaving the blender is within the control area or not; and
5. The name and address of the person to whom the blender shipped the gasoline and the date of the shipment.

C. Any retail outlet operator who purchases or receives the gasoline and record specified in subsection A or B of this section shall retain the record for one year after the creation of the record or until this chapter ceases to have effect, whichever is the sooner, and shall make such record available for inspection by the commissioner.

D. Any wholesale purchaser-consumer who purchases or receives the gasoline and record specified in subsection A or B of this section shall retain the record for one year after the creation of the record or until this chapter ceases to have effect, whichever is the sooner, and shall make such record available for inspection by the commissioner.

E. Any blender or terminal operator who ships or causes to have shipped gasoline destined for the control area during a control period other than to be sold to a retail outlet operator or a wholesale purchaser-consumer shall make a record to be made no later than the time of shipment of the gasoline. Any person who ships the gasoline destined for the control area during a control period shall carry a copy of the record made by the blender or terminal operator. The blender or the terminal operator shall retain for one year after the creation of the record or until this chapter ceases to have effect, whichever is sooner, a copy of the record and shall make such record available for inspection by the commissioner. Such record shall contain for each batch of gasoline shipped the following information:

1. The date of the shipment of the gasoline;
2. The name and address of the blender or terminal operator shipping or causing to have shipped the gasoline and where the blender or terminal operator is not the person shipping the gasoline, the name and address of the person shipping the gasoline;
3. The name and address of the recipient of the gasoline;
4. The volume of gasoline shipped;
5. The identification of the gasoline as nonoxygenated or oxygenated; and

6. The class of oxygenate used in the gasoline, if any, that is to say whether the gasoline contains an ether or an alcohol based oxygenate, and the oxygen content of the gasoline, if any, required by 2VAC5-480-30 of this chapter.

The person shipping the gasoline destined for the control area during a control period shall provide the recipient of the gasoline with a copy of the record required by this subsection E upon delivery of the gasoline to the recipient. The recipient shall retain for one year after the creation of the record or until this chapter ceases to have effect, whichever is the sooner, a copy of the record and shall make such record available for inspection by the commissioner.

**2VAC5-480-60. Gasoline pump labeling.**

A. The retail outlet operator shall post a label on any gasoline pump located in the control area from which gasoline is dispensed and which is operated by the retail outlet operator. The retailer shall ensure that the label remains permanently affixed to the gasoline pump. The label shall be worded as follows:

"The following statement is applicable only from November 1 through the last day of February:  
"The gasoline dispensed from this pump is oxygenated and will reduce carbon monoxide pollution from motor vehicles."

B. The retail outlet operator shall post the label required by subsection A of this section in block letters of no smaller than 20-point bold type, in a color contrasting with the background. The label shall be placed in the upper two-thirds of the front panel of the gasoline pump on the vertical surface of the same side as the price and gallonage or quantity display of the gasoline pump in a position plain and conspicuous from the driver's position.

C. The retail outlet operator shall also label the pump with:

1. The brand name, trademark or trade name of the motor fuel it contains;
2. The grade, blend or mixture of the motor fuel it contains;
3. The octane rating of the motor fuel it contains; and
4. If the product contains one percent or more ethanol or methanol, information identifying the kind of alcohol and the percentage of each at the time of blending, in letters not less than one inch in height.<sup>4</sup>

<sup>4</sup> From §59.1-167 A of the Code of Virginia.

**2VAC5-480-70. Sampling, testing, and oxygen content calculations.**

A. Sampling methodologies used by the commissioner to determine compliance with this chapter shall be those set forth in Appendix D, 40 CFR Part 80, which is hereby adopted by reference.

B. Determination by the commissioner of the oxygenate and its weight and volume in gasoline shall be in accordance with test method ASTM D 4815-89 as set forth in ASTM specification D 4814 or other methods developed or approved by the United States Environmental Protection Agency.

C. Oxygen content shall be calculated by the commissioner by multiplying the mass concentration of each oxygenate in gasoline by the oxygen molecular weight contribution of the oxygenate. All volume measurements shall be adjusted to 60 degrees Fahrenheit. For the purpose of calculating oxygen content, the following oxygen molecular weight contributions shall be used:

Oxygenate	Oxygen Mass Relative Density	
Fraction	60/60	
<> F		
Methyl Alcohol .....	0.4993	0.7963
Ethyl Alcohol .....	0.3473	0.7939
n-Propyl Alcohol .....	0.2662	0.8080
Isopropyl Alcohol .....	0.2662	0.7899
n-Butyl Alcohol .....	0.2158	0.8137
Isobutyl Alcohol .....	0.2158	0.8058
sec-Butyl Alcohol .....	0.2158	0.8114
tertiary-Butyl Alcohol .....	0.2158	0.7922 *
Methyl Tertiary-Butyl Ether .....	0.1815	0.7460
Ethyl tertiary-Butyl Ether .....	0.1566	0.7452
tertiary-Amyl Methyl Ether .....	0.1566	0.7752
tertiary-Hexyl Methyl Ether .....	0.1377	0.7860
Dilso propyl ether .....	0.1566	0.7300

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FN\* Extrapolated, below freezing temperature.

D. Oxygenated gasoline shall consist of a single homogenous mixture, presenting no indication of phase separation when tested by the commissioner in accordance with the test method described in Annex A3 of ASTM Specification D-4814.

1. -8°C (17°F) during the month of January.
2. -7°C (19°F) during the month of February.
3. -3°C (26°F) during the month of March.
4. 3°C (37°F) during the month of April.
5. 9°C (48°F) during the month of May.
6. 10°C (50°F) during the months of June, July, August, and September.
7. 4°C (39°F) during the month of October.
8. -2°C (28°F) during the month of November.
9. -7°C (19°F) during the month of December.

**2VAC5-480-80. Compliance and enforcement.**

A. Any retail outlet operator or wholesale purchaser-consumer will be deemed in compliance with the requirements of this chapter during a transitional period comprising the first 10 days of the control period, provided that for all deliveries of gasoline during the five days immediately preceding the control period the gasoline delivered to that retail outlet operator or wholesale purchaser-consumer complies with the minimum oxygenate content specified by 2VAC5-480-30.

B. Any retail outlet operator or wholesale purchaser-consumer who purchases or receives, and offers for sale, or dispenses gasoline found not to be in compliance with the requirements of this chapter will be subject to having such gasoline ordered off sale or removed from use by the commissioner. After such ordering off sale or removal from use, the retail outlet operator or wholesale purchaser-consumer may:

1. Re-offer for sale gasoline that has been ordered off sale or removed from use, provided that prior to such re-offering for sale such gasoline has been blended by any person with additional oxygenates sufficient to comply with the minimum oxygenate content specified by 2VAC5-480-30, and provided that prior to such re-offering for sale the sampling taken by the commissioner



meets the minimum oxygenate content specified by 2VAC5-480-30 of this chapter;

2. Sell or transfer gasoline for use outside the control area that has been ordered off sale or removed from use, provided that the retail outlet operator or wholesale purchaser-consumer complies with the record keeping requirements of 2VAC5-480-50 C (in the case of the retail outlet operator) and 2VAC5-480-50 D (in the case of the wholesale purchaser-consumer) of this chapter, and provided that prior to the sale or transfer the retail outlet operator or wholesale purchaser-consumer provides the commissioner with an affidavit stating that the retail outlet operator or the wholesale purchaser-consumer will not sell or transfer the gasoline in or to the control area during the control period, and also stating the proposed disposition of the gasoline; or

3. Have gasoline that has been ordered off sale or removed from use released and returned to the retail outlet operator or wholesale purchaser-consumer by the commissioner, provided that prior to such release the retail outlet operator or wholesale purchaser-consumer provides the commissioner with an affidavit stating that the retail outlet operator or wholesale purchaser-consumer will not sell or transfer the gasoline in or to the control area during the control period, and also stating the proposed disposition of the gasoline.

#### DOCUMENTS INCORPORATED BY REFERENCE

ASTM D 4814-95c, Standard Specification for Automotive Spark-Ignition Engine Fuel, published February 1996.

ASTM D 4815-94a, Standard Test Method for Determination of MTBE, ETBE, TAME, DIPE, Tertiary-Amyl Alcohol and C1 to C4 Alcohols by Gas Chromatography, published September 1994.