

# CLEAN PRODUCTS MARKET ANALYSIS OVERVIEW OF SURVEY PLAN

Presentation to the MWAQC Technical Advisory Committee  
January 10, 2017

## BACKGROUND

- Differences in current product regulations in the member states (DC-MD-VA)

| <b>Jurisdiction</b>  | <b>Automotive Refinishing Coatings</b> | <b>Residential Heating Oil</b>               |
|----------------------|--|--|
| District of Columbia | 2009 OTC rules                         | 500 ppm (No. 2 fuel oil)<br>(15 ppm in 2018) |
| Maryland             | 2009 OTC rules                         | 500 ppm (No. 1 & 2)                          |
| Northern Virginia    | 2002 OTC rules                         | None   |

## STUDY QUESTION

- Due to the regional nature of supplier and distribution networks, do manufacturers and distributors voluntarily sell cleaner products in Northern Virginia, even if not required by state regulations?
- If yes, could MWCOG and its member air agencies apply to the USEPA for State Implementation Plan (SIP) credit for voluntary emission reductions?



Image Source: MWCOG

## STUDY DESIGN CRITERIA

- Meet USEPA criteria for seeking SIP credit
  - Quantifiable
  - Surplus
  - Enforceable
  - Permanent
  - Adequately Supported
- Consistent with prior emission inventories' calculation methodologies

# STUDY DESIGN – DATA NEEDS FOR EMISSION CALCULATIONS

- Automotive refinishing coatings
  - Current and future employment numbers
  - Employee-based emission factor
  - % volatile organic compound (VOC) emission reduction resulting from cleaner formulations
  - Fraction of the industry selling cleaner formulations in NoVA
- Residential heating oil
  - Current and future fuel oil consumption per household
  - Current and future number of households
  - Emission factor for particulate matter (PM) based on fuel sulfur content
  - Fraction of the industry selling lower sulfur heating oil to residences in Northern VA, DC, and MD

# IDENTIFICATION OF STUDY PARTICIPANTS

- Initiated outreach to industry associations to identify potential participants
  - Automotive refinishing coatings
    - Focus on manufacturers and distributors, not end-users
    - American Coatings Association (Automotive Refinishing Committee)
  - American Petroleum Institute, Petroleum Marketers Association of America, Mid-Atlantic Petroleum Distributors' Association
    - Focus on distributors and wholesalers
  - Further methods of respondent identification will be required, depending on industry feedback
- Aim to reach at least 25-30% of participants and evaluate market share representation

## SURVEY DISTRIBUTION

- Send cover letter and questionnaire by email
  - Includes language on how the anonymity and confidentiality of individual company responses will be maintained
- Beta-test the questionnaire with industry associations and 1-2 respondents from each industry
- Obtain responses with a two-contact approach
  - Round 1: Follow-up by email or phone on non-responses after 2 weeks
  - Round 2: Same as above after 2 weeks
  - Additional rounds: Focus on non-responsive companies with significant market presence

## SURVEY ANALYSIS

- Review responses for completeness and accuracy
- Follow up with relevant contact person if clarifications or additional information as needed
- Compile all responses into spreadsheet for analysis, with removal of company-specific identifying information
- Prepare results and findings for MWCOG review



# QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS



# QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

## 1) Firm Identification

a. Respondent Name: \_\_\_\_\_

b. Respondent Title: \_\_\_\_\_

c. Company Name: \_\_\_\_\_

d. Address: \_\_\_\_\_  
\_\_\_\_\_

e. Contact Phone: \_\_\_\_\_

f. Contact E-mail: \_\_\_\_\_

## 2) How would you describe your operations with regard to Motor Vehicle and Mobile Equipment Non-Assembly Line Refinishing and Recoating Coatings?

Manufacturer

Distributor

End User

Other (please describe): \_\_\_\_\_

\_\_\_\_\_

# QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

3) a. In which MWCOG (Metropolitan Washington Council of Governments) region(s) do you operate? (Select all that apply)

**Northern Virginia**

(City of Alexandria, Arlington Co., City of Fairfax, Fairfax Co., City of Falls Church, Loudoun Co., City of Manassas, City of Manassas Park, Prince William Co.)

**District of Columbia**

(District of Columbia)

**Maryland**

(Charles Co., Frederick Co., Montgomery Co., Prince George's Co.)

b. What are the number of persons your firm employs in each of these regions?

**Northern Virginia:**

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Persons or Full-Time Employees (FTE) (please circle one)

**District of Columbia:**

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Persons or FTE

**Maryland:**

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Persons or FTE

## QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

- 4) a. Are you aware that Maryland and DC have more stringent volatile organic compound (VOC) regulatory emission limits for mobile equipment repair and refinishing coatings than Virginia (including Northern Virginia)?

Yes

No

- b. If you operate/manufacture/distribute in more than one of these three regions, please select the statement that best represents your operations.

(Please select one)

- (1) We sell the same product(s) within Northern Virginia as in Maryland and DC, which means our Northern Virginia product meets the limits required by MD and DC.
- (2) Our product(s) sold in Northern Virginia meet Virginia requirements only, and do not meet the stricter limits required by MD and DC.
- (3) Both (1) and (2), depending on product types. Please specify product types in Question #5.
- (4) Not Applicable

# QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

c. Do you anticipate any future changes in products or operations that would affect your response to Question #4a above?

Yes

No

Please explain: \_\_\_\_\_

(What changes and when?) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

5) If you selected either (2) or (3) in Question #4a above, how do the volatile organic compound (VOC) contents of products in Northern Virginia differ from DC and Maryland?

\_\_\_\_\_  
\_\_\_\_\_

# QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

6) For products supplied in the **Northern Virginia** region (districts listed in Question #3), what is your estimated sales volume for each of the following product categories?<sup>1</sup>

Please provide sales both for 2015 and the average over the years 2012 through 2015, if available.

| <u>Coating Product Category</u>   | <b>Average VOC Content</b><br>(specify<br>pounds/gallon<br>or grams/liter) | <u>Sales Volume (gallons)</u> |                                  |
|-----------------------------------|--|-------------------------------|----------------------------------|
|                                   |  | <b>2015</b>                   | <b>2012 through 2015 average</b> |
| Automotive pretreatment primer:   | _____  | _____                         | _____                            |
| Automotive primer-surfacer:       | _____  | _____                         | _____                            |
| Automotive primer-sealer:         | _____  | _____                         | _____                            |
| Single stage topcoat:             | _____  | _____                         | _____                            |
| 2 stage basecoat/clearcoat:       | _____  | _____                         | _____                            |
| 3 or 4-stage basecoat/clearcoat:  | _____  | _____                         | _____                            |
| Automotive multi-colored topcoat: | _____  | _____                         | _____                            |
| Automotive specialty:             | _____  | _____                         | _____                            |

## QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

a. In the next year, do you anticipate changes in the VOC content of products you supply to the **Northern Virginia** region? (if applicable)

- Yes
- No
- Not Applicable

b. Please explain:

# QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

7) What is your estimated market share in each of these regions (percent)?<sup>1</sup>

**Northern Virginia**

**District of Columbia**

**Maryland**

\_\_\_\_\_ %      \_\_\_\_\_ %      \_\_\_\_\_ %

8) If unable to answer Question #7, what are your estimated total sales in each of these regions?

**Northern Virginia**

**District of Columbia**

**Maryland**

\$ \_\_\_\_\_      \$ \_\_\_\_\_      \$ \_\_\_\_\_



## QUESTIONNAIRE – AUTOMOTIVE REFINISHING COATINGS

9) What are the NAICS (North American Industry Classification System) code(s) for your operations (if known)?

Primary NAICS code: \_\_\_\_\_

Secondary NAICS code(s): \_\_\_\_\_

(if applicable) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10) Any additional information and/or comments

# QUESTIONNAIRE – RESIDENTIAL HEATING OIL



# QUESTIONNAIRE – RESIDENTIAL HEATING OIL

## 1) Firm Identification

a. Respondent Name: \_\_\_\_\_

b. Respondent Title: \_\_\_\_\_

c. Company Name: \_\_\_\_\_

d. Address: \_\_\_\_\_

\_\_\_\_\_

e. Contact Phone: \_\_\_\_\_

f. Contact E-mail: \_\_\_\_\_

## 2) How would you describe your operations with regard to residential heating oil?

- Terminal
- Bulk Distributor or Supplier (including operation of bulk storage tanks)
- Small/Direct Distributor
- Other (please describe): \_\_\_\_\_

\_\_\_\_\_

# QUESTIONNAIRE – RESIDENTIAL HEATING OIL

3) a. In which MWCOG (Metropolitan Washington Council of Governments) region(s) do you operate?

(select all that apply)

**Northern Virginia**

(City of Alexandria, Arlington Co., City of Fairfax, Fairfax Co., City of Falls Church, Loudoun Co., City of Manassas, City of Manassas Park, Prince William Co.)

**District of Columbia**

(District of Columbia)

**Maryland**

(Charles Co., Frederick Co., Montgomery Co., Prince George's Co.)

b. What are the number of persons your firm employs in each of these regions?

**Northern Virginia:**

---

Persons or Full-Time Employees (FTE)  
(please circle one)

**District of Columbia:**

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Persons or FTE

**Maryland:**

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Persons or FTE

## QUESTIONNAIRE – RESIDENTIAL HEATING OIL

4) If you operate/distribute in more than one of these three regions, does the heating oil supplied in each region have the same maximum sulfur content?

- Yes
- No
- Not Applicable

5) If you operate/distribute in more than one of these three regions, please select the statement that best represents your operations:

(Please select one)

- (1) We sell the same product within Northern Virginia as in Maryland and DC, which means our Northern Virginia product meets the strictest sulfur content limits imposed by MD and/or DC (current limit of 500 parts per million or 0.05%).
- (2) Our product sold in Northern Virginia meets Virginia requirements only, and does not meet the stricter sulfur content limits required by MD and/or DC.
- (3) Not Applicable

## QUESTIONNAIRE – RESIDENTIAL HEATING OIL

- 6) What are the NAICS (North American Industry Classification System) code(s) for your operations (if known)?

Primary NAICS code: \_\_\_\_\_

Secondary NAICS code(s): \_\_\_\_\_

(if applicable) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# QUESTIONNAIRE – RESIDENTIAL HEATING OIL

The following section (Questions 7 through 11) refers to heating oil product sold/distributed within the cities and counties included in the **Northern Virginia** region. If you do not sell or distribute heating oil within this region, please skip this section and continue with the next section (Question 12).

## NORTHERN VIRGINIA

- 7) What is your estimated annual throughput for each of the following heating oil products (by sulfur content) in the Northern Virginia region?<sup>2</sup>

Please provide your total throughput for 2015 for each class of home and commercial/industrial heating oil, if applicable.

| Maximum Sulfur Content Per Specification | Residential 2015 Throughput (gallons) | Commercial/Industrial 2015 Throughput (gallons) |
|--|---------------------------------------|---|
| 15 ppm (parts per million) or 0.0015%:   | _____                                 | _____   |
| 500 ppm or 0.05%:                        | _____                                 | _____   |
| 2,000 ppm or 0.2%:                       | _____                                 | _____   |
| Other (please specify):<br>_____         | _____                                 | _____   |

## QUESTIONNAIRE – RESIDENTIAL HEATING OIL

8) Do you anticipate changes in the sulfur content and volumes of residential heating oil supplied to the **Northern Virginia** region in the next year? Next three years? Next ten years?

**By 2018**

- Yes  
 No  
 Not Applicable

**By 2020**

- Yes  
 No  
 Not Applicable

**By 2028**

- Yes  
 No  
 Not Applicable

Please explain:

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9) What are your projected sales volumes of residential heating oil for the **Northern Virginia** region over the next year? Next five years?<sup>3</sup>

2017 through 2018: \_\_\_\_\_

2017 through 2021: \_\_\_\_\_



# QUESTIONNAIRE – RESIDENTIAL HEATING OIL

10) From which terminal, pipeline, and/or supplier do you obtain heating oil for distribution in the **Northern Virginia** region?

Please explain:

Source(s):

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Location(s):

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11) What is your estimated market share in the **Northern Virginia** region?<sup>3</sup>

\_\_\_\_\_ %

## QUESTIONNAIRE – RESIDENTIAL HEATING OIL

Repeat of Questions 7-11 for respondents who sell oil to DC and MD

- Primary focus is to determine potential for emission credit for Northern VA
- Will also evaluate if DC and MD are already receiving heating oil with 15 ppm sulfur content

# DISCUSSION