Appendix J

EPA Voluntary Measures Guidance
Allowable Tonnage from Voluntary Measures
Voluntary Measure Commitments
Additional Documentation for Calculations

MEMORANDUM

SUBJECT: Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs).

FROM: Richard D. Wilson,
Acting Assistant Administrator
for Air and Radiation

TO: EPA Regional Administrators, 1 - 10

Introduction

This memorandum provides guidance and sets forth the Environmental Protection Agency's (EPA) policy and interpretation regarding the granting of explicit State Implementation Plan (SIP) credit for Voluntary Mobile Source Emission Reduction Programs (VMEPs) under section 110 of the Clean Air Act. Voluntary mobile source measures have the potential to contribute, in a cost-effective manner, emission reductions needed for progress toward attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). EPA believes that SIP credit is appropriate for voluntary mobile source measures where we have confidence that the measures can achieve emission reductions. This memorandum announces EPA's intent to grant emission reduction credits for VMEPs, the terms and conditions for establishing and implementing VMEPs, and the requirements for approvable VMEP SIP submittals.

The establishment of this policy pertains solely to voluntary mobile source programs and is not intended to establish precedent for other air emissions source categories. Guidance on emission reduction credits for voluntary activities for other source categories may be established through future guidance documents. This policy also does not change existing EPA policy on credits for mobile source measures in the context of emissions trading programs or Economic Incentives Programs.

Policy Summary

The Clean Air Act Amendments of 1990 increased the responsibility of States[1] to demonstrate progress toward attainment of the NAAQS. At the same time, air pollution control programs in the U.S. have had difficulty regulating the emission reduction potential of smaller or unconventional sources. EPA supports innovative methods in achieving air quality goals and wishes to promote the creation of viable voluntary mobile source air quality programs. The desire to recognize the emission reductions from these sources has led the Agency to develop policies to support an increasing variety of innovative approaches. EPA recognizes that emission reduction credit toward SIP air quality demonstrations can be a positive factor for gaining political and institutional support for program development and implementation. The demonstration of air quality benefits is also desirable for program assistance through EPA's section 105 grants and is a requirement for project eligibility under the Department of Transportation's Congestion Mitigation and Air Quality Improvement (CMAQ) program.

This memorandum is intended to clarify the basic framework for ensuring that VMEPs become eligible for SIP credit. Generally, a State would submit a SIP which 1) identifies and describes a VMEP; 2) contains projections of emission reductions attributable to the program, along with relevant technical support documentation; 3) commits to monitor, evaluate, and report the resulting emissions effect of the voluntary measure; and 4) commits to remedy in a timely manner any SIP credit shortfall if the VMEP program does not achieve projected emission reductions.

EPA anticipates that this policy will generate additional interest and resources toward VMEP development and data collection. EPA wishes to ensure that the potential benefits of VMEPs are properly quantified and that these benefits are sustained as successful components of the SIP. As experience and information regarding the effectiveness of VMEPs becomes available, EPA intends to provide further technical guidance and assistance to the States. As States and EPA gain more experience with VMEPs in quantifying emissions benefits, more precise information will be available in determining the effectiveness of a range of programs. The type of information that EPA expects to gain from evaluating VMEPs includes emissions benefits, public response and education, cost of implementation, secondary indicators\benefits, quantification methodologies, and data collection.

[1]Throughout this document, the term "State" refers to any state or local government body or agency with the authority to submit SIPs to EPA for approval.

EPA hopes that the effect of this policy will be to generate sufficient information and programmatic experience to warrant a wider application of VMEPs for progress toward attainment under the new NAAQS policy framework. EPA believes that States should benefit from this policy by having a wider range of programmatic options to consider. This policy will ultimately support the creation of new, cost-effective air quality programs and market-based incentives.

Background

Historically, mobile source control strategies have focused primarily on reducing emissions per mile through vehicle and fuel technology improvements. Tremendous strides have been made resulting in new light-duty vehicle emission rates which are 70 to 90 percent less than for the 1970 model year. However, transportation emissions continue to be a significant cause of air pollution due to a doubling of vehicle miles traveled (VMT) from 1970 to 1990, and tripling since 1960. In some quickly developing urban areas, the more recent VMT growth rate is even more dramatic. In San Diego, California, VMT tripled between 1970 and 1990. VMT in Las Vegas, Nevada, increased 160 percent from 1981 to 1991, and nearly doubled in Phoenix, Arizona, during the same time period.

The increasing cost of technological improvements to produce incrementally smaller reductions in grams per mile or grams per kilowatt hour emissions in the entire fleet of vehicles and engines, along with the time it takes for technological improvements to penetrate the existing fleets, suggests that supplemental or alternative approaches for reducing mobile source air pollution are necessary. Mobile source strategies which attempt to complement existing regulatory programs through voluntary, nonregulatory changes in local transportation sector activity levels or changes in in-use vehicle and engine fleet composition are being explored and developed.

A number of such voluntary mobile source and transportation programs have already been initiated at the State and local level in response to increasing interest by the public and business sectors in creating alternatives to traditional emission reduction strategies. Some examples include economic and market-based incentive programs, transportation control measures, trip reduction programs, growth management strategies, ozone action programs, and targeted public outreach. These programs attempt to gain additional emissions reductions beyond mandatory Clean Air Act programs by engaging the public to make changes in activities that will result in reducing mobile source emissions.

Definitions

The following definitions apply to VMEPs as described in this memorandum.

Voluntary Measures: Emission reduction programs that rely on voluntary actions of individuals or other parties for achieving emission reductions.

Seasonal Measures: Emission reduction programs that are in effect only during the season in which the area experiences high pollutant concentrations.

Episodic Measures: Activity-based mobile source programs that are implemented during identified periods of high pollutant concentrations, varying by meteorological conditions. These measures may or may not be continuous in nature depending on program design. The statutory authority for approval of episodic measures in SIPs applies only to activity-based mobile source emission reduction measures as explained below.

Clean Air Act Authority

EPA plans to use its authority under the Clean Air Act to allow SIP credit for new approaches to reducing mobile source emissions. This policy represents a flexible approach regarding the SIP requirements set forth in section 110[2], and economic incentive provisions in section 182 and 108 of the Act. This policy responds to State and local government interest in gaining SIP credits and funding for VMEP programs which will count toward their State's plan to make progress toward attainment and maintenance of the NAAQS and builds on EPA's history of approving measures that rely to some degree on voluntary compliance, such as provision of mass transit. Recognizing that only a limited amount of implementation experience currently exists, and that information on VMEP effectiveness will be evaluated and reported as a result of this policy, EPA plans to re-evaluate this policy in the future.

Authority to approve of voluntary measures in SIP

EPA believes that it has authority under CAA section 110 to approve voluntary measures in a SIP for emission reduction credit. However, EPA believes that as part of its SIP submittal a State must commit to monitor, evaluate, and report the resulting emissions effect of the voluntary measure, whether the measure is implemented directly by the State or another party, and to

[2]The requirements regarding emission reductions needed to achieve attainment of the NAAQS.

remedy in a timely manner any credit shortfall.

In light of the increasing incremental cost associated with additional mobile source emission reductions, the lead time required for new technologies to penetrate fleets, and the increasing need to target mobile source use to realize reductions, where voluntary measures meet the requirements of this policy, EPA believes that it is appropriate and consistent with the Act to allow a limited percentage of the total emission reductions needed to satisfy any statutory requirement, as described below, to come from voluntary measures. In the event the voluntary measure does not achieve the projected emission reductions, the State, having previously committed in its SIP to remedying such shortfalls, will pursue appropriate follow-up actions in a timely fashion including, but not limited to: adjusting the voluntary measure, adopting a new measure, or revising the VMEP emission credits to reflect actual emission reductions, provided overall SIP commitments are met. EPA believes that voluntary mobile source measures, in conjunction with the enforceable commitment to monitor emission reductions achieved and rectify any shortfall, meet the SIP control measure requirements of the Act.

Establishment of a cap on SIP credits allowed for VMEPs

Under this policy, in light of the innovative nature of voluntary measures and EPA's inexperience with quantifying their emission reductions, EPA is setting a limit on the amount of emission reductions allowed for VMEPs in a SIP. The limit is set at three percent (3%) of the total projected future year emissions reductions required to attain the appropriate NAAQS. However, the total amount of emissions reductions from voluntary measures shall also not exceed 3% of the statutory requirements of the CAA with respect to any SIP submittal to demonstrate progress toward, attainment of, or, maintenance of the NAAQS[3]. EPA has analyzed a number of voluntary mobile source programs which could be incorporated into a SIP. The emission reduction potential of these programs is generally a fraction of one ton per day. A three percent limit on emission reductions from VMEPs will allow areas to implement and claim SIP credit for a significant number of voluntary mobile source programs. This cap still provides

[3]For example, an ozone area classified as severe needing reductions of 200 tpd of volatile organic compounds (VOC) and 100 tpd of oxides of nitrogen (NO_x) from the projected year 2005 baseline inventory could rely on VMEPs for up to 3% of the required reductions from each pollutant, or 6 tpd of VOC and 3 tpd of No_x. The area could also use all or a portion of these same reductions for purposes of meeting interim rate-of-progress (ROP) milestones, but again the 3% limit would apply. Thus, if the area needed 25 tpd of creditable VOC reductions to meet the 1999 ROP target, no more than 0.75 tpd of the VOC reduction in the 1999 ROP plan could come from VMEPs.

a sufficient incentive for developing and implementing VMEPs, while setting a limit on the extent to which a SIP can rely on innovative programs with which we have had limited experience.

[6] In accordance with the Act language (section 182 (g)(4)(A)), the EIP applies to "incentives and requirements to reduce vehicle emissions and vehicle miles traveled," including TCM's contained in section 108 of the Act. In addition, the EIP defines mobile sources to mean on-road (highway) vehicles (e.g., automobiles, trucks and motorcycles) and non-road vehicles (e.g., trains, airplanes, agricultural equipment, industrial equipment, construction vehicles, off-road motorcycles, and marine vessels). In certain cases, States are required to adopt EIP provisions into their State Implementation Plan (SIP). The EIP also serves as guidance for all other States that choose to adopt EIP provisions into their SIP as non-mandatory EIPs. In 1994, the Agency issued EIP rules and guidance (40 CFR part 51 subpart U), which outlined requirements for establishing these programs.

Relationship to Economic Incentive Programs

The 1990 Amendments statutorily required the Agency to develop Economic Incentive Program (EIP) rules[4]. The EIP provides general SIP guidance for the adoption of incentive and other innovative programs. Some programs that depend on voluntary actions also require either State or local government authorization to implement the program. In these cases, which include certain transportation control measures such as congestion pricing programs, it may be more appropriate to use the EIP authority to incorporate the measure into the SIP. Further, where emissions reductions are expected to exceed the 3% limit, EPA would anticipate the State could use the EIP to incorporate measures. If a State wishes to have a VMEP approved under the EIP program rules, EPA is willing to work with the State to develop such a program.

Approval of Voluntary Measures into the SIP - Key Criteria

This section sets forth minimum criteria for approval of VMEPs into SIPs. These criteria require that the VMEP not interfere with other requirements of the Clean Air Act, be consistent with SIP attainment and Rate of Progress requirements, and that emission reductions be:

1. Quantifiable - VMEP emission reductions must be quantifiable. The level of uncertainty in achieving emission reductions must be quantified, and this uncertainty must be reflected in the projected emission reductions claimed by the VMEP. VMEPs must also contain procedures designed to both evaluate program implementation and to report program results as described in the section "Technical Support for VMEPs" of this guidance.

2. Surplus - The VMEP emission reductions may not be substituted for mandatory, required emission reductions. States may submit to EPA for approval any program that will result in emission reductions in addition to those already credited in a relevant attainment or maintenance

[4]In accordance with the Act language (section 182 (g)(4)(A)), the EIP applies to "incentives and requirements to reduce vehicle emissions and vehicle miles traveled," including TCM's contained in section 108 of the Act. In addition, the EIP defines mobile sources to mean on-road (highway) vehicles (e.g., automobiles, trucks and motorcycles) and non-road vehicles (e.g., trains, airplanes, agricultural equipment, industrial equipment, construction vehicles, off-road motorcycles, and marine vessels). In certain cases, States are required to adopt EIP provisions into their State Implementation Plan (SIP). The EIP also serves as guidance for all other States that choose to adopt EIP provisions into their SIP as non-mandatory EIPs. In 1994, the Agency issued EIP rules and guidance (40 CFR part 51 subpart U), which outlined requirements for establishing these programs.

plan, or used for purposes of SIP demonstrations such as conformity, rate of progress, or emission credit trading programs.

3. Enforceable - A State's obligations with respect to VMEPs must be enforceable at the State and Federal levels. Under this policy, the State is not responsible, necessarily, for implementing a program dependent on voluntary actions. However, the State is obligated to monitor, assess and report on the implementation of voluntary actions and the emission reductions achieved from the voluntary actions and to remedy in a timely manner emission reduction shortfalls should the voluntary measure not achieve projected emission reductions. As stated earlier, EPA anticipates that the State will take the steps it determines to be necessary to assure that the voluntary program is implemented and that emission reductions are achieved so that corrective SIP actions are not required. For example, the State may want to sign a Memorandum Of Understanding (MOU) with the VMEP sponsors.

Any uncertainty in the emission reductions projected to be achieved by the VMEP must be estimated and reflected in the emission reduction credits claimed in the SIP. As part of this submission, the State must commit to conducting program evaluations within an appropriate time-frame. The State must also report the resulting information to EPA within an appropriate time-frame in order to document whether the program is being carried out, and emission reductions are being achieved as described in the SIP submittal. Through the program evaluation provisions contained in this policy EPA anticipates that States will discover any potential emission reduction shortfall in a timely manner and appropriately account for such shortfall either by changing the program to address the shortfall, adopting a new measure, or revising the VMEP's emission credits to reflect actual emission reductions achieved, provided overall SIP commitments are met.

4. Permanent - Emission reductions produced by the VMEP must continue at least for as long as the time period in which they are used by applicable SIP demonstrations. The VMEP need not continue forever to generate permanent emissions reductions, but must specify an appropriate period of implementation in the SIP. Voluntary actions in such a program, and the resulting emission reductions, can be discrete (temporary) or continuous, depending on the nature of the program. For example, an ozone action day program which takes effect over an ozone season, but calls for specific actions on days when exceedences of the ozone standard are likely (i.e., episodic measures) is considered a continuous program producing discrete (temporary) reductions, and therefore the reductions are SIP creditable.

5. Adequately Supported - As with all SIP creditable programs, VMEPs must demonstrate adequate personnel and program resources to implement the program.

Approval of Episodic Measures

EPA has concluded that episodic transportation control measures and other mobile source related market response measures may be approved for SIP credit under the Act. Prior to the

1990 amendments to the Act, EPA believed that section 123 of the Act, which bars the use of dispersion techniques in calculating emission limitations, might apply to all control measures, including transportation and mobile source market controls. However, new language was added to the Act in the 1990 amendments that EPA believes indicates a clear congressional intent to allow and even require the incorporation of episodic transportation and mobile source market response programs in SIPs.

Several new requirements added to the Act in 1990 specifically require adoption of transportation control measures as listed in section 108(f)(l) of the Act under certain circumstances. See, for example, section 182(c)(5) - Transportation Controls and section 182(d)(1) - Vehicle Miles Traveled. Section 108(e) and (f) authorizes EPA to issue guidance on various types of transportation control measures available for selection in the control programs required under section 182. Section 108(f)(1)(B) identifies methods that contribute to reductions in mobile source related pollutants during periods in which a primary NAAQS will be exceeded. Episodic transportation and market response measures designed to operate during periods when ambient pollution levels are anticipated to exceed the NAAQS clearly fall within the scope of these types of programs that Congress has authorized areas to include in their section 182 transportation and vehicle miles traveled programs.

EPA therefore concludes that any implication that section 123 may have applied to transportation and mobile source market response programs under the Act as amended in 1977 has been clarified by the Act as more recently amended in 1990 by the addition of the specific authorization for adoption of any program identified in section 108(f) under the transportation control programs required under section 182.

Technical Support for VMEPs

A State may take credit in its SIP for VMEPs only if they are quantifiable. VMEPs which are thought to be directionally sound, but for which quantification is not possible cannot be granted credit. EPA believes that carefully designed and implemented VMEPs are quantifiable to the extent necessary to grant SIP credit.

All VMEP submittals must include documentation which clearly states how the sources from which the reductions are occurring, are currently, or will be addressed in the emissions inventory, ROP plan, and attainment or maintenance plan, as applicable. This documentation should include a description of the assumptions used in estimating and tracking emissions and emissions reductions from affected sources.

The following sections are intended to provide general guidance on the elements of emission reduction calculation and evaluation procedures that must be addressed in a VMEP SIP submittal.

Emission Reduction Calculation

To receive SIP credit for a VMEP, the SIP submittal must contain a good faith estimate of emission reductions, including technical support documentation for the conclusion that the measure will produce the anticipated emission reductions. VMEP emission reduction calculations must account for and be adjusted to reflect uncertainties in the program. The calculations must be adjusted to account for two types of uncertainty:

> compliance uncertainty - the extent to which the responsible party (a public or private entity) will fully implement the VMEP program, and
>
> programmatic uncertainty - the extent to which voluntary responses actually occur and/or the inherent uncertainties of program design.

The State must adjust the VMEP calculation for compliance and programmatic uncertainty, based on program design elements, and on the predictive quality of the information, data, and analytic methodology used by the State to develop the projected emission reductions. The State must justify the appropriateness of the adjustments in its VMEP SIP submittal, usually as part of the technical support document.

The adjusted emission reduction estimate should be developed and justified by the State by taking into account various elements of the VMEP program design. These elements could include, but not be limited to: the voluntary mechanism upon which the program is based, such as public outreach or reduced fares; the variability in emission rates from affected mobile sources; the extent of uncertainty in the emissions quantification procedure; and the frequency and type of program evaluation, monitoring, record keeping and reporting.

Evaluation Reporting Procedures

States which use VMEPs in their SIP must describe how they plan to evaluate program implementation and report on program results in terms of actual emissions reductions. Program evaluation provisions for VMEPs must be accompanied by procedures designed to compare projected emission reductions with actual emissions reductions achieved. The timing of the evaluations must be specified in the VMEP SIP submittal. The States and program sponsors will benefit from accurate and complete evaluation reports. EPA expects that program evaluations and experience gained over time will result in VMEP modifications to increase effectiveness.

The State must provide timely post-evaluation reports to the EPA relevant to the SIP time-frame in which the emission reductions are being used. These reports may be used by EPA for the purpose of reviewing subsequent SIP submissions required by the CAA, including but not limited to: periodic inventories, rate of progress (milestone compliance demonstrations), attainment demonstrations, and maintenance demonstrations.

EPA is working with State and local government representatives to develop methodologies which would provide sufficient technical support for VMEP SIP submissions. As results become available, EPA will provide technical guidance to assist in the development of VMEP emission reduction estimates and program evaluation procedures. However, EPA's policy is to recognize the experience of State and local voluntary programs in quantifying emission reductions and evaluating program results. Acceptable methodologies and procedures will not be limited to those developed by EPA, and programs are encouraged to discuss technically sound alternative methods with EPA Regional Office staff.

VMEP Emission Reduction Use

As explained above, under Title I of the Clean Air Act, EPA is permitting a limited amount of voluntary mobile source measures to be included in SIPs and FIPs and to be adopted for any criteria pollutant in both nonattainment and attainment areas. VMEP emission reductions shall be limited in use as determined by existing applicable SIP policy including offsets, Rate of Progress, attainment demonstrations, baseline determinations, redesignation and maintenance demonstrations.

Future Guidance and Regional Coordination

It is incumbent upon EPA Regional Offices and Headquarters to coordinate the implementation of this policy through consultation and exchange of information. It will be necessary to determine the appropriateness of individual VMEPs, applicability of emission reductions, development of methodologies to estimate emission reductions (including the appropriateness of uncertainty adjustments), peer review, and standardization of policy. To the extent that issues cannot be resolved through ongoing coordination efforts between Regional and Headquarter offices, issues may be ultimately raised through the SIP consistency process. EPA encourages early consultation between project sponsors, planners, and EPA's Regional offices during the development of VMEPs.

For further information on EPA's policy on VMEPs or the guidance set forth in this memorandum, contact Michael Ball of the Office of Mobile Sources, at 313-741-7897.

Attachments

Attachment 1

Examples of Voluntary Mobile Source Emission Reduction Programs

The following are some examples which are representative of voluntary mobile source emission reduction programs (VMEPs) that could be implemented and credited with emission reductions for SIP related purposes. These programs can and have been designed to be implemented on an episodic, seasonal, or a continual basis. More program examples and ideas may be found on the following websites:

EPA Office of Mobile Source Smart Travel Resources Center web site (www.epa.gov/omswww/strc.htm)
Market Incentive Resource Center (www.epa.gov/omswww/market.htm)
Episodic Measures Database (www.epa.gov/omswww/reports/episodic/study/htm)

Employer Based Transportation Management Programs

Various programs implemented by employers to manage the commute and travel behavior of employees, such as: van pooling, car pooling, subscription buses, walking, shuttle services, guaranteed rides home, alternative work schedules, financial incentives(transit passes and subsidies) and on-site TDM support.

Work Schedule Changes

Changes in work schedules to provide flexibility to employees to commute outside of peak travel periods, such as: telecommuting, flextime, compressed work weeks, staggered work hours.

Area-wide Rideshare Incentives

Promotional assistance aimed at encouraging commuters to use alternatives to single occupant vehicles, such as: marketing of ridesharing services, transit station shuttles, computerized carpool matching, vanpool matching, program implementation assistance.

Parking Management

Management of parking supply and demand, such as: preferential parking locations for carpools and vanpools, preferential parking prices for carpools and vanpools, fee structures that discourage commuter parking, reduced parking for new developments.

Special Event Travel Demand Management

Special plans to manage travel demand in effect during special events, defined as destinations for a large number of vehicle trips which occur on a one-time, infrequent, or scheduled basis(such as athletic events, festivals, and major entertainment performances). These measures could include parking management, remote parking connecting with transit or shuttle services, efficient traffic routing efforts, public information and communications systems.

Vehicle Use Limitations/Restrictions

Techniques to limit vehicle activity in a given geographic area or specified time period, such as: auto restricted zones, pedestrian malls, traffic calming, no-drive days, commercial truck restrictions on parking and idling.

Reduced Vehicle Idling

Measures to reduce the amount of time which vehicles spend in idle modes as part of their overall operation, such as: reduced operations of drive-thru facilities such as banks and fast-food restaurants, reduced construction of drive-thru facilities, programs that facilitate reducing idling at truck stops, transfer facilities and loading docks at commercial developments.

Small Engine and Recreational Vehicle Programs

Measures targeted at reducing the frequency and duration of small engine and recreational vehicle use. Other programs aim to shift the time period in which emissions producing activities, such as lawn and landscape maintenance, take place so that the negative impact on air quality is reduced. These measures are usually associated with episodic or seasonal control programs with a significant component of public education and outreach to encourage the voluntary change in activities.

Attachment 2

Example of a Voluntary Program

Program scenario: A State air quality agency is approached by a public utility to begin a lawn mower buy back program. The State would like to take credit for the emissions reductions from this private sector activity in it's 15% plan.

Up-front credit: The State would like to take credit predicting the effect of the program in reducing emissions associated with replacing uncontrolled lawnmower emissions with electric -- non polluting lawnmowers.

SIP Submittal

General Process

- State notifies EPA of its intent to take credit for voluntary lawnmower program. Includes program information and technical support documentation and commitment to remedy any emission reduction shortfall in a timely manner.
- Regional Office reviews and approves up-front credit after comments.
- Activity is conducted by the public utility.
- State verifies that the program achieved the predicted benefits and generates information for EPA review.
- Regional Office reviews the State SIP submission and determines that the credits have been achieved as predicted. Also approved under milestone compliance.

Program Identification: State submits to EPA its intent to conduct or take credit for the voluntary lawn mower buy back program in the SIP. The State will describe how the program or activity will work in practice. In the submission, the State will describe the following program elements.

Program participants
How the program works
Activity effects
Emission effects
State commitment for evaluation, reporting, remedying emission credit shortfall
Technical support documentation

Program Participants The State will identify the sponsors of the program. In this case the public utility.

How the Program Works As part of the submittal the State will include a description of the basic program, predicted effect of the program on a given NAAQS criteria pollutant and a

commitment to evaluate the program over the desired period of implementation and remedy any emission reduction shortfall in a timely manner.

In the submittal, the State describes the basic program including how the utility intends to facilitate the activity-- buy back of lawn mowers. On three consecutive Saturdays, the utility customers and employees are able to bring in their gasoline powered lawnmowers and receive a voucher toward the purchase of any new electric lawnmower.

Activity Effects The State will submit predicted and observed activity effects. Data will be generated and analyzed which examines the predicted and actual effect of the program**.**

In this case, using information provided by the utility, the State estimates that 2000 lawnmowers would be replaced by non-polluting electric mowers.

Emission Effects Activity effects ultimately are translated into emissions benefit calculations (usually in tons per day\per year).

The State would be given up-front credit for emission reductions in terms of HC, CO and other NAAQS criteria pollutants for 2000 mowers being replaced by electric mowers.

State Commitment for Evaluation, Reporting, and Addressing Credit Shortfall The State will be responsible for ensuring that data will be collected regarding participation and the effectiveness of the program. In addition, the State must commit to remedy any SIP credit shortfall in a timely manner if the voluntary measure does not achieve projected emission reductions.

The State, as part of the evaluation and reporting commitment, submits to EPA a comparison of the predicted effect of the program with the actual observed levels. In this example the utility finds that 2000 mowers were replaced. Thus, the predicted reductions were achieved.

Technical Support Documentation The State will submit Technical Support Documents describing the program and the methodology for predicting emissions benefits. Where possible the State should identify data collection methodologies and information necessary for describing implementation, compliance, effectiveness and other relevant information. This information should account for the following:

Programmatic Uncertainty- Because the program will be voluntary in nature, the State will be responsible for submitting to EPA the predicted and, eventually, the actual participation levels.

Analytic Methodology- The State will describe how they estimated participation levels and the effect of the activity on emissions

MEMORANDUM

December 1, 2003

To: Severe SIP File

From: Beth Lowe, MWCOG/DEP

Subject: Maximum Allowable Reductions Under EPA Voluntary Measures Policy

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EPA's Voluntary Measures policy states non-attainment areas can use voluntary measure to fulfill up to 3% of the VOC and NOx reductions required for a rate-of-progress demonstration. Tables 1 and 2 display the calculations of the maximum voluntary reductions allowable in the 2002 and 2005 rate-of-progress plans, respectively.

Table 1
Calculation of Maximum Reductions from Voluntary Measures in 1999-2002 Rate-of-Progress Plan

Description	**VOC (tons/day)**	**NOx (tons/day)**
2002 Uncontrolled Emissions	526.3	880.1
2002 Target Level	347.7	626.3
1990-2002 Reductions Required, Excluding Growth	72.8	130.4
1990-2002 Emissions Growth	105.8	123.4
Total 1990-2002 Reductions Required, Including Growth	178.6	253.8
3% of Total Required Reductions	**5.4**	**7.6**

Table 2
Calculation of Maximum Reductions from Voluntary Measures in 2002-2005 Rate-of-Progress Plan

Description	**VOC (tons/day)**	**NOx (tons/day)**
2005 Uncontrolled Emissions	540.5	880.8
2005 Target Level	339.3	539.0
1990-2005 Reductions Required, Excluding Growth	72.8	196.6
1990-2005 Emissions Growth	128.4	145.2
Total 1990-2005 Reductions Required, Including Growth	201.2	341.8
3% of Total Required Reductions	**6.0**	**10.2**

Table 1 shows that there is a limit of 5.4 tpd VOC and 7.6 tpd NOx from voluntary measures for the Washington region's 1999-2002 rate-of-progress plan. Similarly, Table 2 shows a limit of 6.0 tpd VOC and 10.2 tpd NOx in the 2002-2005 rate-of-progress plan.

Reference:

Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation to EPA Regional Administrators 1-10, "Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs)".

Summary of Voluntary Measure Commitments

Summary of Reductions for Measure 7.6.1: Voluntary Bundle

Measure	VOC	NOx
Gas Can Replacement Program	0.01	0.00
Sale of Reformulated Consumer Products (VA)	3.00	0.00
Low-VOC Paints Program	0.17	0.00
Remote Sensing Device Program	No Credit	No Credit
Regional Wind Power Purchase	0.00	0.05
Diesel Retrofit Program	No Credit	No Credit
Alternative Fueled Vehicle (AFV) Purchase Program	No Credit	No Credit
Auxiliary Power Units on Locomotives	0.01	0.13
TOTAL	**3.19**	**0.19**

Reductions Available by January 1, 2005

Measure	VOC	NOx
Gas Can Replacement Program	0.01	0.00
Reformulated Consumer Products MOU	3.00	0.00
Low-VOC Paints Program	0.17	0.00
Remote Sensing Diagnostic Program	No Credit	No Credit
Regional Wind Power Purchase	0.00	0.05
Diesel Retrofit Program	No Credit	No Credit
Alternative Fueled Vehicle (AFV) Purchase Program	No Credit	No Credit
Auxiliary Power Units on Locomotives	0.01	0.13
TOTAL	**3.19**	**0.18**

Measure 7.6.1: Low-VOC Paint Program
Summary of Participation Commitments

Committing Agency or Jurisdiction	Type of Paint or Coating	Effective Date	Gallons Used Per Ozone Season Day (May 1 - September 15)	VOC Content (grams/liter)	Maximum VOC Content Per OTC AIM Regulation (grams/liter)	VOCs emitted @ AIM baseline (lbs)	Actual VOCs emitted (lbs)	Pounds of VOCs Avoided Per Ozone Season Day	Tons of VOCs Avoided Per Ozone Season Day
Prince George's County	Flat Interior	May 2005	5	0	100	4.17	0.00	4.17	0.002
M-NCPPC Prince George's	Flat Interior	December 2003	15	0	100	12.52	0.00	12.52	0.006
Fairfax County	Exterior Non-Flat High-Gloss	April 2004	40	150	250	83.45	50.07	33.38	0.017
MDOT	Traffic Marking Coatings	December 2003	502.5	79	150	629.04	331.29	297.74	0.149
	TOTAL GALLONS		**562.5**			**TOTAL REDUCTIONS (tpd VOC)**			**0.166**

Measure 7.6.1: Portable Fuel Container Replacement Program
Summary of Participation Commitments

Organziation/Agency	Number of Containers	Date Complete	Average Reductions Per Can (tpd)	Tons of VOCs Avoided Per .Day
Montgomery County	288	December 2004	0.00000922	0.0027
Fairfax County	300	May 2005	0.00000922	0.00277
City of Fairfax	150	July 2004	0.00000922	0.00138
City of Fairfax Contractors	65	July 2004	0.00000922	0.00060
Prince George's County	95	January 2004	0.00000922	0.00088
Maryland National Capital Parks & Planning Commission, Prince George's	250	April 2005	0.00000922	0.00231
Prince William County	100	May 2005	0.00000922	0.0009
Arlington County	230	May 2005	0.00000922	0.0021
Total Reductions	**1,478 fuel containers**			**0.01 tpd VOC**

Measure 7.6.1: Wind Power Purchase Program
Summary of Participation Commitments

Organization/Agency	Annual Use (kWh)	% Purchased as Wind Power	Effective Date	Total Wind Power Purchase (kWh)	Assumed Annual Wind Power Capacity Factor	Total MW Wind Power Capacity Reserved	Assumed Seasonal Wind Power Capacity Factor	Expected Credit (tpd NOx Avoided)	SIP Credit (50% of Expected Credit)
Arlington County	N/A	N/A	May 2005	2,340,000	37%	0.722	20%	0.010	0.005
Montgomery County	560,000,000	5%	December 2004	28,000,000	37%	8.639	20%	0.119	0.050

Total Purchase	**30,340 MWh**	**0.05 tpd NOx**

Measure 7.6.1: Diesel Retrofit
Fairfax County Transit Bus Fleet Emissions Estimation
Effective Date May 2005

Buses	Mfg. Year	MAKE	MODEL	Engine mfr	Technology	Annual VMT (per bus)	Daily VMT (total fleet)	Annual Fuel (total fleet)	Emission Factors (gr/mi)			Base Emission (tons/day)			Emission Reduction (CRT Filters) tons/day		
								gal	VOC	NOx	PM	VOC	NOx	PM	VOC (60%)	NOx (0%)	PM (60%)
148	Transit Buses				ULSD Fuel with CRT Filters	38,720	16,280	1,525,000	0.9303	17.9844	0.5000	0.0167	0.3227	0.0090	Not Estimated	Not Estimated	Not Estimated

Note: Mobile 6 Regional emissions factors for transit buses are used for VOC and NOx estimation

ATV emissions fators are used for PM emission estimation

Emissions factors used for corresponding speed of 25 mph

Life span of CRT filter - 15 years

Fuel for total fleet per year - 1.525 millon gallons (data provided by Faifax County)

VMT per bus - 110 miles

ULSD fuel incremental cost - 15 cents/gallon

Cost of CRT filter - $6000/unit

Emissions Reduction from EPA Verified Technology Page

Measure 7.6.1: Diesel Retrofit
Fairfax County Public Schools (VA) School Bus Fleet Assessment
Effective Date May 2005

Buses	Mfg. Year	MAKE	MODEL	Engine mfr	DOC/ECM	Annual VMT (per bus)	Annual Fuel (per bus)	Daily VMT (total fleet)	Emission Factors (gr/mi)			Base Emission (tons/day)			DOC COST	ECM COST	Total Cost (DOC +ECM)
#							gal/bus		VOC	NOx	PM	VOC	NOx	PM	$2500/unit	$1000/unit	$3500/bus
93	87	IONAL	WARD	International	(Too old)	6604	909	3071	0.7635	10.0588	0.7	0.0026	0.0340	0.0024	$0		$0
1	88	FORD	WAYNE	Ford	(Too old)	9742	1195	49	0.7635	10.0588	0.7	0.0000	0.0005	0.0000	$0		$0
188	88	GMC	WAYNE	Detroit Diesel	(Too old)	9759	1331	9173	0.7635	10.0588	0.7	0.0077	0.1017	0.0071	$0		$0
21	89	BLUEBIRD	BLUEBIRD	Caterpillar	DOC	9269	1365	973	0.7635	10.0588	0.7	0.0008	0.0108	0.0008	$52,500		$52,500
68	89	FORD	WAYNE	Ford	DOC	10932	1427	3717	0.7635	10.0588	0.7	0.0031	0.0412	0.0029	$170,000		$170,000
6	89	FORD	WAYNE	Ford	DOC	13506	1695	405	0.7635	10.0588	0.7	0.0003	0.0045	0.0003	$15,000		$15,000
35	89	FORD	WAYNE	Ford	DOC	13060	1587	2286	0.7635	10.0588	0.7	0.0019	0.0253	0.0018	$87,500		$87,500
10	89	FORD	WAYNE	Ford	DOC	11401	1327	570	0.7635	10.0588	0.7	0.0005	0.0063	0.0004	$25,000		$25,000
39	90	BLUEBIRD	BLUEBIRD	Cummins	DOC	10272	1391	2003	0.7635	10.0588	0.7	0.0017	0.0222	0.0015	$97,500		$97,500
1	90	BLUEBIRD	BLUEBIRD	Cummins	DOC	9730	947	49	0.7635	10.0588	0.7	0.0000	0.0005	0.0000	$2,500		$2,500
24	90	BLUEBIRD	BLUEBIRD	Cummins	DOC	13244	1394	1589	0.7635	10.0588	0.7	0.0013	0.0176	0.0012	$60,000		$60,000
54	91	BLUEBIRD	BLUEBIRD	Cummins	DOC	10113	1370	2731	0.7635	10.0588	0.7	0.0023	0.0303	0.0021	$135,000		$135,000
11	91	BLUEBIRD	BLUEBIRD	Cummins	DOC	12214	1273	672	0.7635	10.0588	0.7	0.0006	0.0074	0.0005	$27,500		$27,500
1	92	BLUEBIRD	BLUEBIRD	Cummins	DOC	9558	1011	48	0.7635	10.0588	0.7	0.0000	0.0005	0.0000	$2,500		$2,500
6	93	GENESIS	IS2902	International	DOC	13048	1489	391	0.7635	10.0588	0.7	0.0003	0.0043	0.0003	$15,000		$15,000
18	94	BLUEBIRD	BLUEBIRD	Cummins	DOC	13911	1499	1252	0.7635	10.0588	0.3	0.0011	0.0139	0.0004	$45,000		$45,000
1	94	NAVISTAR	THOMAS	International	DOC	8349	1227	42	0.7635	10.0588	0.3	0.0000	0.0005	0.0000	$2,500		$2,500
10	94	NAVISTAR	THOMAS	International	DOC	13355	1754	668	0.7635	10.0588	0.3	0.0006	0.0074	0.0002	$25,000		$25,000
8	94	NAVISTAR	THOMAS	International	DOC	9328	1199	373	0.7635	10.0588	0.3	0.0003	0.0041	0.0001	$20,000		$20,000
23	94	THOMAS	MVP-ER	Cummins	DOC	11829	1807	1360	0.7635	10.0588	0.3	0.0011	0.0151	0.0004	$57,500		$57,500
1	95	NAVISTAR	THOMAS	International	DOC	12849	1394	64	0.7635	10.0588	0.3	0.0001	0.0007	0.0000	$2,500		$2,500
3	95	THOMAS	MVP-ER	Caterpillar	DOC	12064	1969	181	0.7635	10.0588	0.3	0.0002	0.0020	0.0001	$7,500		$7,500
2	95	THOMAS	MVP-ER	Cummins	DOC	12568	1943	126	0.7635	10.0588	0.3	0.0001	0.0014	0.0000	$5,000		$5,000
1	96	AMTRAN	RE	International	DOC	9797	1806	49	0.7635	10.0588	0.3	0.0000	0.0005	0.0000	$2,500		$2,500
1	96	GENESIS	IS3706	International	DOC	9184	1403	46	0.7635	10.0588	0.3	0.0000	0.0005	0.0000	$2,500		$2,500
1	96	NAVISTAR	AMTRAN	International	DOC	10884	1593	54	0.7635	10.0588	0.3	0.0000	0.0006	0.0000	$2,500		$2,500
18	97	NAVISTAR	GENESIS	International	DOC	12819	1632	1154	0.7635	10.0588	0.3	0.0010	0.0128	0.0004	$45,000		$45,000
32	98	AMTRAN	GENESIS	International	DOC	14837	1786	2374	0.7635	10.0588	0.3	0.0020	0.0263	0.0008	$80,000		$80,000
20	98	THOMAS	MVP-EF	Cummins	DOC	12779	1508	1278	0.7635	10.0588	0.3	0.0011	0.0142	0.0004	$50,000		$50,000
6	98	THOMAS	SAF T LINER	Caterpillar	DOC	11532	1885	346	0.7635	10.0588	0.3	0.0003	0.0038	0.0001	$15,000		$15,000
100	99	AMTRAN	RE	International	DOC/ECM	11011	1809	5505	0.7635	10.0588	0.3	0.0046	0.0610	0.0018	$250,000	$100,000	$350,000
20	99	GENESIS	IS3000	International	DOC	14201	1959	1420	0.7635	10.0588	0.3	0.0012	0.0157	0.0005	$50,000		$50,000
95	00	AMTRAN	RE	International	DOC/ECM	12032	2012	5715	0.7635	10.0588	0.3	0.0048	0.0634	0.0019	$237,500	$95,000	$332,500
45	00	THOMAS	MVP-EF	Caterpillar	DOC	15579	2035	3505	0.7635	10.0588	0.3	0.0030	0.0389	0.0012	$112,500		$112,500
1	00	AMTRAN	GENESIS	International	DOC	12475	1814	62	0.7635	10.0588	0.3	0.0001	0.0007	0.0000	$2,500		$2,500
116	01	AMTRAN	RE	International	DOC/ECM	12930	2191	7500	0.7635	10.0588	0.3	0.0063	0.0832	0.0025	$290,000	$116,000	$406,000
30	01	THOMAS	SAF T LINER	Caterpillar	DOC	15670	1834	2350	0.7635	10.0588	0.3	0.0020	0.0261	0.0008	$75,000		$75,000
21	02	AMTRAN	FE	International	DOC	13687	1878	1437	0.7635	10.0588	0.3	0.0012	0.0159	0.0005	$52,500		$52,500
79	02	AMTRAN	RE	International	DOC/ECM	12302	2136	4859	0.7635	10.0588	0.3	0.0041	0.0539	0.0016	$197,500	$79,000	$276,500
46	03	AMTRAN	RE	International	DOC/ECM	12302	2136	2830	0.7635	10.0588	0.3	0.0024	0.0314	0.0009	$115,000	$46,000	$161,000
15	03	AMTRAN	FE	International	DOC	13687	1878	1027	0.7635	10.0588	0.3	0.0009	0.0114	0.0003	$37,500		$37,500
46	04	AMTRAN	RE	International	**	12302	2136	2830	0.7635	10.0588	0.3	0.0024	0.0314	0.0009	$115,000	$46,000	$161,000
12	04	AMTRAN	FE	International	DOC	13687	1878	821	0.7635	10.0588	0.3	0.0007	0.0091	0.0003	$30,000		$30,000
1329								**76954**				**0.0648**	**0.8533**	**0.0377**	**$2,617,500**	**$482,000**	**$3,099,500**

Buses with DOC + ECM	482
Buses with only DOC	565
Old buses NOT fitted with ECM and/or DOC	282
Total Fleet	1329

Note: Mobile 6 Regional emissions factors for school buses are used for VOC and NoX estimation
ATV emissions fators are used for PM emission estimation
Emissions factors used for corresponding speed of 25 mph
Life span for DOC and ECM - 15 years

DOC : Diesel Oxidizing Catalyst

ECM : Electronic Control Module
** No retrofit on these buses (factory installed DOC and ECM reprogram (LEV option)

Fairfax County Public Schools (VA) School Bus Fleet Assessment
(as of 12-1-03)

Emissions & Cost Effectiveness

FFX Bus Fleet size	1329	Base Emissions			Emissions Reduction for Entire Fleet		
Buses with DOC + ECM	482	VOC	NOx	PM	VOC	NOx	PM
Buses with only DOC	565	0.0648	0.8533	0.0377			
Buses Retrofitted by May 1, 2005	600	0.04	0.49	0.02	**N/A**	**N/A**	**N/A**

Measure 7.6.1: Alternative Fueled Vehicle Purchase Program
Summary of Participation Commitments

Organziation/Agency	Model Year of Vehicle Being Replaced	The replacement of this vehicle is*	Type of Vehicle on the Road Without Hybrid Purchase	Effective Date	Number of Vehicles	Average Daily Miles Per Vehicle (May-Sept)	Tons of VOC Avoided Per Day	Tons of NOxs Avoided Per Day
Fairfax County	1999 or later	scheduled	LDGV LEV under 50,000 miles	May 2005	32	40	N/A	N/A
Montgomery County	1996-1999	unscheduled	Tier I LDGV over 50,000 miles	December 2004	5	180	N/A	N/A
Prince George's County	pre-1996	scheduled	LDGV LEV under 50,000 miles	March 2004	3	32	N/A	N/A
M-NCPPC Prince George's	pre-1996	scheduled	LDGT1 LEV under 50,000 miles	July 2004	1	56	N/A	N/A
M-NCPPC Prince George's	pre-1996	scheduled	LDGT1 LEV under 50,000 miles	July 2004	1	48	N/A	N/A

* Scheduled vehicles replacements are replacements within the normal scheduled timetable. Unscheduled vehicle replacements ar replacements before the vehicle has completed its useful life (as usually defined by the jurisdiction or agency).

Total Reductions	**42 vehicles**	**Not Estimated tpd VOC**	**Not Estimated tpd NOx**

Measure 7.6.1: Locomotive Idling Controls
Summary of Participation Commitment

Committing Agency or Jurisdict	Number of Units	Effective Date	Hours Operational Per Week	Locomotive Fuel Efficiency at Idle (gal/hour)	Locomotive VOC Emissions Without APU (lb/gal)	Locomotive NOx Emissions Without APU (lb/gal)	Tons of VOCs Avoided Per Ozone Season Day	Tons of NOx Avoided Per Ozone Season Day
Virginia Railway Express	13	December 2003	95	3	0.0506	0.5044	0.01	0.13
TOTAL UNITS	**13**				**TOTAL REDUCTIONS (tpd)**		**0.01**	**0.13**

Commitment Letters from Implementing Agencies

ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE COUNTY MANAGER
#1 COURTHOUSE PLAZA
2100 CLARENDON BOULEVARD, SUITE 302
ARLINGTON, VIRGINIA 22201
(703) 228-3120 • FAX (703) 228-3295

RON CARLEE
COUNTY MANAGER

December 4, 2003

Mr. Robert Burnley, Director
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219

Dear Director Burnley:

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

The elected leadership of the Washington region is developing proposals to improve air quality. These proposals require action by Arlington County, not only in the role of a county responsible for implementing public programs to reduce air pollution, but also as a large corporate entity whose actions will impact regional air quality. Arlington County takes these responsibilities very seriously. We believe that meeting the federal air quality standard for ozone is a high priority. Though we are acting in conjunction with the regional efforts being undertaken by the Metropolitan Washington Air Quality Committee, we must also lead the way for others to follow.

As a result, I am pleased to inform you that Arlington County hereby commits to implementing the following programs:

- The County will replace 230 conventional gas cans with CARB approved cans for County staff use, no later than May 2005. A residents' can-exchange program is being explored.
- A low-/no-VOC paint purchasing policy is already in place in our two largest paint-using departments. This policy will continue.
- The County government has been using an 80/20 diesel/biodiesel mix ("B-20") countywide since August 2002.

The County will purchase 2,340 MWH of wind energy from West Virginia no later than May 2005.

- The County's two largest paint-using departments will incorporate episodic bans on VOC-containing paints on Code Orange or Red Days, no later than May 2005
- The County's three departments with lawn mowing responsibilities will follow, and require contractors to follow, episodic bans on lawn mowing on Code Orange or Red Days, no later than May 2005.
- The County will enforce, no later than May 2005, an episodic vehicle-refueling ban at its County filling sites, avoiding the dispensing of an estimated 2000 gallons/day on Code Orange and Red Days.
- The County will enforce, no later than May 2005, an episodic ban on pesticide application on Code Orange and Red Days.
- The County will encourage an estimated 150 County employees to telecommute on Code Red Days.
- The County has initiated an integrated pesticide program in its facilities in March 2001. This policy will continue.
- The County estimates that it will increase the number of alternate-fuel vehicles in its fleet from 118 in FY 2003 to 149 in FY 2004.

These programs represent a permanent commitment to emissions-reducing behavior. The emission reductions resulting from these programs will be reserved for use in the SIP. Arlington County also commits to provide an annual accounting of the implementation of these measures to enable validation of the credit taken for this voluntary measure in the Washington region's SIP. Details of Arlington County's commitment to these programs are provided herein as attachments.

If you have any questions or require additional information regarding this commitment, please contact John Mausert-Mooney at 703-228-3619.

Sincerely,

Ron Carlee

cc: Hon. Phil Mendelson, Chair, Metropolitan Washington Air Quality Committee

CSPA
Consumer Specialty Products Association

December 5, 2003

Robert G. Burnley
Director
Virginia Department of Environmental Quality
Commonwealth of Virginia
P.O. Box 10009
Richmond, Virginia 23240

Subject: Ozone Transport Commission Model Consumer Products Regulation

Dear Mr. Burnley:

The Consumer Specialty Products Association (CSPA) is aware that the Virginia Department of Environmental Quality (DEQ) and the Virginia Air Board are considering requiring the reformulation of 80 types of consumer products to be sold in the Commonwealth, and that this requirement is part of a broad effort by the Ozone Transport Commission (OTC) to control ozone transport in the Mid-Atlantic and Northeastern States. In summary, the OTC's Model Consumer Product Rule bases its standards for volatile organic compounds (VOCs) and other important regulatory provisions on the stringent technology-forcing regulations that have been adopted in California over the course of the past 14 years. Moreover, CSPA understands that the Commonwealth of Virginia must submit a State Implementation Plan (SIP) to the U.S. Environmental Protection Agency in March 2004 to meet the one-hour ozone attainment standard in Northern Virginia.

CSPA is a voluntary, non-profit national trade association representing more than 230 companies engaged in the manufacture, formulation, distribution, and sale of chemical specialties products for household, institutional (*e.g.*, hospitals, restaurants, office buildings, schools) and industrial use. CSPA member companies manufacture and market at least 30 (*i.e.*, two-thirds) of the 45 consumer product categories and approximately 60 (*i.e.*, more than three-quarters) of the 80 different types of products covered by the proposed regulations. Our products include disinfectants that kill germs in homes, hospitals and restaurants, candles and fragrances that eliminate odors, pest management products for home and garden, cleaning products for use throughout the home and for automobiles, and a host of other products used everyday.

During the Summer of 2000, CSPA worked constructively and cooperatively with the state environmental agency officials that were members of the OTC's Consumer Products Workgroup. CSPA supports the OTC's efforts to establish ***uniform*** clean air regulations within the 12 states and the District of Columbia that comprise the Ozone Transport Region (OTR). The adoption of a uniform set of regulations ensures that interstate commerce will not be impaired by the promulgation of numerous – and potentially conflicting – regulations in different states.

At the DEQ's preliminary public hearing in Richmond on January 24, 2001, CSPA presented oral testimony supporting adoption of the OTC Model Rule in the Commonwealth of Virginia. We have also presented oral testimony and filed written comments supporting the adoption of the OTC Model Rule in Delaware, Pennsylvania, New York and Maryland.

CSPA will work with our member companies in their effort to provide reformulated products that meet the OTC consumer products model regulation specifications to Virginia retailers no later than January 1, 2005. Many CSPA member companies market products on a nation-wide basis; thus these products will comply with the OTC-based standards. Moreover, given the geographic proximity of Virginia to neighboring jurisdictions of the District of Columbia, Maryland and Delaware, it is a practical certainty that CSPA member companies that market products on a regional basis will also manufacture compliant products for sale in Virginia as of January 1, 2005. We trust that our effort to help our member companies provide compliant products to consumers will assist the Commonwealth of Virginia and its counties in the Metropolitan Washington, DC-MD-VA region meet the one-hour ozone standard deadline by November 2005.

CSPA and our member companies look forward to continuing our active participation as a stakeholder in this important rulemaking process. We strongly support the adoption of uniform regulations throughout the Mid-Atlantic and Northeastern Region. If you have any questions, please do not hesitate to contact me at (202) 872-8110.

Very truly yours,

Christopher Cathcart
President

CC/jty

C T F A

THE COSMETIC, TOILETRY, AND FRAGRANCE ASSOCIATION

December 12, 2003

E. EDWARD KAVANAUGH
PRESIDENT

Robert G. Burnley
Director
Virginia Department of Environmental Quality
Commonwealth of Virginia
P.O. Box 10009
Richmond, Virginia 23240

Subject: Virginia State Implementation Plan and Consumer Products

Dear Mr. Burnley:

The Cosmetic, Toiletry, and Fragrance Association (CTFA) is the national trade association for the personal care products industry. CTFA represents almost 600 member companies. Approximately one-half of those companies manufacture or distribute the vast majority of finished cosmetic products sold in the U.S. The remainder are suppliers of raw materials, ingredients and packaging to the personal care products industry.

CTFA is aware that the Virginia Department of Environmental Quality (DEQ) and the Virginia Air Board are considering requiring the reformulation of 80 types of consumer products. A Virginia rule, when adopted, would require that consumer products manufactured on or after January 1, 2005 follow the volatile organic compound (VOC) limits adopted by several Mid-Atlantic and Northeast States in the Ozone Transport Region (OTR).

At the same time, the Commonwealth of Virginia also must submit a State Implementation Plan (SIP) to the U.S. Environmental Protection Agency (EPA) in March 2004 to meet the one-hour ozone attainment standard in Northern Virginia. The Virginia consumer product rulemaking will not be completed by March 2004, but the Commonwealth is seeking credit in its SIP for voluntary VOC reductions from consumer products manufactured on or after January 1, 2005 and sold in state.

CTFA has supported the uniform adoption of consumer product VOC standards in the Ozone Transport Region for personal care products. Virginia has worked toward such a regional VOC strategy with the Washington Metropolitan Council of Governments (COG) and its sister states, Maryland and the District of Columbia. (Maryland and Delaware recently adopted a final consumer product rule and the District is finalizing its VOC rule that would take effect January 1, 2005.)

1101 17TH ST., N.W., SUITE 300 WASHINGTON, D.C. 20036-4702
202.331.1770 FAX 202.331.1969
http://www.ctfa.org
SECURING THE INDUSTRY'S FUTURE SINCE 1894

CTFA will work with our member companies in their effort to provide reformulated products that meet the OTC Consumer Products Model VOC Rule specifications. Given the geographic proximity of Virginia to neighboring jurisdictions that have adopted the OTC standards for consumer products manufactured on or after January 1, 2005, such reformulated products would be available in Virginia as well.

We trust that our effort to help our member companies provide compliant products to consumers will assist the Commonwealth of Virginia and its counties in the Metropolitan Washington, DC-MD-VA region meet the one-hour ozone standard deadline by November 2005.

Sincerely,

Catherine C. Beckley

Catherine C. Beckley
Associate General Counsel

The City of Fairfax

Office of the City Manager

November 13, 2003

Robert Burnley, Director
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219

Dear Director Burnley,

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

The elected leadership of the Washington region is developing proposals to improve air quality. These proposals require action by the City of Fairfax, not only in the role of a municipal government responsible for implementing public programs to reduce air pollution, but also as a large corporate entity whose actions will impact regional air quality. The City of Fairfax takes these responsibilities very seriously. We believe that meeting the federal air quality standard for ozone is a high priority. Though we are acting in conjunction with the regional efforts being undertaken by the Metropolitan Washington Air Quality Committee, we must also lead the way for others to follow.

As a result, I am pleased to inform you that the City of Fairfax hereby commits to use of low-emission gas cans beginning in July 1, 2004. This program represents a permanent commitment to replace all of the agency's gas cans with low-emitting gas cans, the sale of which will be mandated under the Commonwealth's Portable Fuel Containers rule. The City of Fairfax also commits to require use of redesigned gas cans by all city contractors beginning in July 1, 2004. The City of Fairfax commits to provide an accounting of the number and size of cans collected and certification of their proper disposal. This will enable validation of the credit taken for this voluntary measure in the

City Hall • Fairfax, Virginia 22030-3630 • (703) 385-7850 • FAX (703) 385-7811
TTY (703) 385-7855 • Internet: http://www.ci.fairfax.va.us

Washington region's SIP. The City of Fairfax also affirms that gas cans submitted for SIP credit were not already intended for replacement for reasons unrelated to this program. Details of the City of Fairfax's commitment to replacing the City's gas cans are provided in Attachment 1. Details of the commitment to require use of the cans by contractors are included in Attachment 2.

If you have any questions or require additional information regarding this commitment, please contact Alex Verzosa at 703-385-7889.

Sincerely,

Robert Sisson
City Manager

cc: Mayor and City Council
Hon. Phil Mendelson, Chair, Metropolitan Washington Air Quality Committee
John Veneziano, Director of Public Works
Andrew Wilson, Building Official/Fire Marshall
Alexis Verzosa, Transportation Director

Attachment 1: City of Fairfax Gas Can Replacement Commitments

Low Emission Can Manufacturer	Number of Cans Replaced	Approximate can size (gallons)
	75	1
	50	2
	25	5

Attachment 2: City of Fairfax Gas Can Replacement Commitments Contractors

Low Emission Can Manufacturer	Number of Cans Replaced	Approximate can size (gallons)
	25	1
	25	2
	15	5

COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX
BOARD OF SUPERVISORS
FAIRFAX, VIRGINIA 22035

Suite 530
12000 GOVERNMENT CENTER PARK
FAIRFAX, VIRGINIA 22035-0071

TELEPHONE 703/324-2321
FAX 703/324-3955
http://www.co.fairfax.va.us/gov/chair.htm

KATHERINE K. HANLEY
CHAIRMAN

November 17, 2003

Mr. Robert G. Burnley
Director
Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 10009
Richmond, VA 23240-0009

Re: Washington region State Implementation Plan Voluntary Control Measures.

Dear Director Burnley:

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the federal one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

The elected leaders of the Washington region are developing proposals to improve air quality. These proposals require action by Fairfax County, not only in the role of a local government responsible for implementing public programs to reduce air pollution, but also as a large corporate entity whose actions will impact regional air quality. Fairfax County takes these responsibilities very seriously. We believe that meeting the federal air quality standard for ozone is a high priority.

As a result, I am pleased to inform you that on November 17, 2003, the Fairfax County Board of Supervisors committed to implementing the following programs by the dates shown:

Voluntary Gas Can Replacement, 300 Gas Cans Replaced by May 2005
Use of Low-Volatile Organic Compound (VOC) Paint, April 2004
Voluntary Diesel Retrofit, 600 School Buses Retrofitted by May 2005

- Episodic Ban on Use of Gasoline Powered Lawn and Garden Equipment, except on specialized turf areas at the golf courses and athletic field complexes, April 2005
- Episodic Ban on Use of Low-VOC Paints, April 2004
- Episodic Ban on Use of Pesticides, April 2004
  Episodic Ban on Refueling of non-essential Vehicles, April 2004
- Telework on Code Red Days, April 2004
- Participation As a Clean Air Partner, April 2004
- Best Practices in Pesticide Applications, April 2004
  Alternative Fueled Vehicle Purchases, 30 Hybrid Vehicles Purchased by May 2005

These programs represent a commitment to emissions-reducing behavior. The emission reductions resulting from these programs will be reserved for use in the SIP. Fairfax County also commits to provide an annual accounting of the implementation of these measures to enable validation of the credit taken for this voluntary measure in the Washington region's SIP.

If you have any questions or require additional information regarding this commitment, please contact Kambiz Agazi, Fairfax County's Environmental Coordinator at (703) 449 8488.

Sincerely,

Katherine K. Hanley

cc: Members, Board of Supervisors
Anthony H. Griffin, County Executive
Robert A. Stalzer, Deputy County Executive
Kambiz Agazi, Environmental Coordinator
Hon. Phil Mendelson, Chair, Metropolitan Washington Air Quality Committee

Board Agenda Item
November 17, 2003

ACTION – 2

Approval of Commitment Letter Supporting Voluntary Control Measures for Inclusion in the Washington Region's State Air Quality Implementation Plan (SIP).

ISSUE:
Board approval of a letter (see attachment I) indicating Fairfax County's commitment to the implementation of various voluntary control measures for inclusion into the Washington region's SIP.

RECOMMENDATION:
The County Executive recommends that the Board of Supervisors approve the letter indicating Fairfax County's commitment to implement the following voluntary control measures for County agencies for inclusion in the Washington region's SIP:

- Gas can replacements
- Use of Low Volatile Organic Compound (VOC) paints (150 g/L)
- Diesel retrofits
- Episodic ban on the use of gasoline powered lawn and garden equipment
- Episodic ban on the use of VOC-containing paints (per label on back of can)
- Episodic ban on the refueling of non-essential vehicles
- Episodic ban on the use of VOC-containing pesticides
- Telework on code red days
- Participation as a Clean Air Partner
- Best practices in pesticide application
- Alternative fueled vehicle purchases

TIMING:
Board action is requested on November 17, 2003. The Metropolitan Washington Air Quality Committee (MWAQC) will be considering the revised SIP on November 24, 2003, and has asked that local governments provide commitments prior to their meeting.

BACKGROUND:
Washington Region Air Quality Planning Process: In 1992, the Environmental Protection Agency (EPA) classified the Metropolitan Washington region as "serious" for non-attainment of the federal one-hour ground-level ozone standard in accordance with

the 1990 Clean Air Act Amendments (CAAA). The Act required the Metropolitan Washington Air Quality Committee to prepare a State Implementation Plan (SIP) for submission to the EPA explaining how the region would reduce emissions that contribute to the formation of ground-level ozone by 15 percent from 1990-1996 and by three percent per year thereafter until the region reached attainment of the federal standard (This demonstration is commonly referred to as a rate-of-progress (ROP)). Ozone forms when nitrogen oxides (NOx) and volatile organic compounds (VOCs) combine with sunlight and heat. The Metropolitan Washington Air Quality Committee (MWAQC) is the entity certified by the governors of Maryland and Virginia and the mayor of the District of Columbia to prepare a regionally coordinated SIP. The three jurisdictions then submit the same SIP separately to EPA.

The Washington region did not meet the attainment deadline of November 1999, due to transported pollution from outside the region. The EPA then granted the region an extension of its attainment deadline to November 2005. On July 2, 2002, the U.S. Circuit Court of Appeals for the District of Columbia decided in a ruling in Sierra Club v. EPA that EPA had a non-discretionary duty under the Clean Air Act to reclassify the region to "severe" non-attainment when it failed to attain the federal standard in November 1999. The EPA reclassified the Washington region in January 2003.

Under the new classification, the CAAA requires the region to develop a SIP that meets more stringent requirements and to attain the federal standard by November 2005. In addition, the region must adopt a contingency plan for the 1999 ROP demonstration, submit an updated attainment demonstration that reflects revised motor vehicle emissions budgets, demonstrate a three percent per year ROP from 1999-2002 and from 2002-2005, adopt contingency measures in case of failure to achieve ROP or attainment as required, and submit an analysis of Reasonably Available Control Measures (RACM). Individual measures considered in the RACM analysis for implementation must meet a number of criteria related to enforceability, technical feasibility, economic feasibility, and achieve a minimum emissions reduction. A RACM analysis ensures that the region is implementing all reasonable measures to achieve attainment of the federal standard on the earliest date possible. In addition, State and local governments, as applicable, must commit to the control and contingency measures before MWAQC can adopt the final SIP.

Beginning in the Fall of 2002, MWAQC identified both control and contingency measures to fulfill all planning requirements of the CAAA. MWAQC's schedule was developed to ensure that the region's federal transportation program authority does not lapse.

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) incorporated the CAAA requirements into transportation policy. As a result, the Transportation Planning

Board (TPB), as the local Metropolitan Planning Organization, is required to perform an air quality analysis on the annual Transportation Improvement Program (TIP) and the Constrained Long Range Plan (CLRP) to ensure that the region stays within the mobile sector budgets established in the region's SIP. The U.S. Department of Transportation requires each region to submit a TIP and CLRP as a prerequisite to receiving federal transportation funds.

In May 2003, MWAQC released for public comment a draft Severe Area SIP for the Washington region. The draft SIP underwent public hearings in July 2003. During the public comment period, EPA stated that the contingency measures MWAQC had identified relied too heavily on Memorandums of Understanding (MOUs) from local governments and private industry, and were not sufficiently enforceable. EPA indicated that approvable contingency measures should take the form of regulations or legislation to ensure additional emissions reductions will occur if needed.

MWAQC adopted a revised SIP *without contingency measures* on August 13, 2003. (Submittal of contingency measures is not required for EPA to find the mobile emissions budget adequate, and transportation planning timelines require an approved mobile budget earlier than the CAAA requires the complete SIP.) On August 19, 2003, the state of Virginia submitted the revised SIP to the EPA. EPA received SIP submissions from Maryland and the District in early September and began the comment period on the SIP on September 10, 2003.

While MWAQC was developing a new SIP, the TPB, Virginia, Maryland, the District of Columbia and the other local jurisdictions, including Fairfax County, have been working to prepare a new TIP and CLRP. The TIP and CLRP will contain a list of proposed projects to be built between now and 2030. A draft list of projects was approved by the TPB for modeling purposes on May 21, 2003. This draft inventory of projects was used to determine the emissions that will be generated by the mobile sector in several survey years (including 2005, 2015, 2025). Based on this analysis, it appears that the transportation project inventory contained in the draft TIP and CLRP will generate a level of emissions below the mobile budget MWAQC set forward in the SIP.

EPA will have 90 days to determine whether or not the mobile sector emissions budgets included in the SIP are adequate for the region to achieve air quality conformity. Assuming that EPA agrees that the mobile sector budgets are adequate, TPB can then submit the new TIP and CLRP to the Federal Highway Administration (FHWA). FHWA will need approximately 90 days to review and approve the TIP and CLRP.

If a new TIP and CLRP are not approved by the end of January 2004 or the region's air quality conformity lapses, most federal funding for transportation projects will stop until the FHWA approves the TIP and CLRP or the region finds a way to achieve conformity.

The ability to continue construction of non-federally funded projects will also be restricted. TPB, the state transportation agencies and the jurisdictions are also working on an interim TIP and CLRP. This document would allow conformity exempt projects and those projects that have already received federal approval to continue in their current phase, until FHWA approves the entire TIP and CLRP.

To fully comply with the requirements of the CAAA, MWAQC expects to submit a final Severe Area SIP, with contingency measures, by March 1, 2004. As MWAQC considered new contingency measures, it became apparent that Virginia, Maryland and the District could not guarantee passage of the necessary regulations or legislation before March 2004. Therefore, MWAQC decided to use some of the regulations that were *control* measures in the August 2003 SIP revision to meet the *contingency* measure requirement instead and to establish additional control measures, for which EPA approval requirements are less demanding (The original control measures are already in the process of being implemented). MWAQC plans to fill this need by obtaining commitments from local and state governments to a sufficient variety of voluntary emission-reducing actions (see below for a summary of voluntary control measures being proposed).

PROPOSED VOLUNTARY CONTROL MEASURES:

MWAQC has asked each local jurisdiction to consider committing to voluntary measures that can be included in the SIP as control measures. County staff has reviewed a variety of measures and the County Executive recommends that the Board of Supervisors approve a letter indicating Fairfax County's commitment to implementing the voluntary control measures listed below for inclusion in the Washington area SIP (see attachment I for the letter). It should be noted that the Board of Supervisors has previously supported the implementation of some of these measures.

- Gas can replacements: Portable gas cans account for a significant amount of emissions escaping into the air every day. By using newer gas cans with features such as shut off valves, harmful gasoline fumes can be reduced by 75 percent. Fairfax County currently owns an estimated 300 gas cans that can be replaced.
- Use of low Volatile Organic Compound (VOC) paints: Besides reducing emissions of ozone-forming compounds, low-VOC paints improve indoor air quality by reducing eye or respiratory irritation caused by exposure to paint fumes.
- Diesel retrofits: The Board of Supervisors has already approved reprogramming of the electronic controls on certain school buses and installation of diesel oxidation catalysts on school buses and other diesel powered county equipment. The Board approved $2 million as part of the FY 2005 Carryover Budget to begin the diesel retrofit program. In addition, funds in the amount of $1.5 million have been made

available in fund 100, County Transit Systems for the retrofit of the CONNECTOR buses with the catalyzed diesel particulate filters.

- Episodic ban on the use of gasoline powered lawn and garden equipment: County and contractor mowing and trimming operations will be deferred on Ozone Action days (Code Red Days), except on specialized turf areas at the golf courses and athletic field complexes. The County will continue a replacement policy to purchase low-emissions lawn and garden equipment that reduce ozone precursor emissions.
- Episodic ban on the use of VOC-containing paints: Deferring the use of VOC-containing paints and coatings on Ozone Action days (Code Red Days) will reduce VOC emissions (an ozone precursor) and overall ground-level ozone formation on Code Red Days.
- Episodic ban on the refueling of non-essential gasoline-powered cars and equipment: The Board of Supervisors already encourages County agencies to defer the refueling of their non-essential gasoline-powered equipment and vehicles on a Code Red Day. In order to better monitor this policy, the County Executive is recommending that a report of any refueling that did occur on a Code Red Day be given to agency directors the next day. This would enable follow-up action without restricting vital functions that require refueling.
- Episodic ban on the use of VOC-containing pesticides: Both the active and inert ingredients of many pesticides are reactive in the formation of ozone. Under this policy, County and contractor applications of pesticides would be deferred on Code Red Ozone Action days.
- Telework on Code Red days: The Board already supports this measure, and the County Executive already encourages teleworking on Code Red Days by encouraging approved teleworking employees to telework even if they were not scheduled for that day. Currently, more than 520 county employees telework two to four days per month. An expansion plan is underway to raise that number to 1,000 by 2005. Telework expansion reflects the Fairfax County Board of Supervisors' support of the regional goal set by the Metropolitan Washington Council of Governments -- to reach a level of 20 percent of the eligible workforce teleworking one day per week or more by 2005. On Thursday, October 23, 2003, the County sponsored a Telework Expo in the Government Center Atrium and Forum. The Expo was a way to inform more employees about the benefits and possibilities of telework. In addition, the Expo contained a compilation of information and activities about the County's telework effort. The Expo also recognized the departments and employees who have contributed to the county's telework effort.
- Participation as a Clean Air Partner: Fairfax County government has been a member of Clean Air (ENDZONE) Partners since 1998, and has been proactive in efforts to inform county employees and residents about air quality programs and ways to reduce air pollution. The county has included information about air quality issues on its Web site. The county has a notification program that involves the posting of Ozone Action Day forecasts on Fairfax County Government Cable

Television Channel 16, and the county Web site, as well as sending e-mail notifications to all county employees. These messages include appropriate actions to take to reduce contributions to ozone formation. Some actions currently practiced by Fairfax County government when a Code Red Day is forecast include the refueling of vehicles after sunset; the restriction on the use of non-essential motorized operating equipment; encouraging employees to telework, and teleconference to participate in meetings off site; and the offering of free trips on the Fairfax Connector and on Metrobus, in cooperation with other local jurisdictions in the region. On Tuesday, Nov. 4, at the University Conference Center and Inn at the University of Maryland's College Park campus, Fairfax County was given an honorable mention by Clean Air Partners in the category of "Outstanding Ozone Action Days Program." The county was recognized for its efforts in establishing voluntary actions to reduce ground-level ozone through an Ozone Action Days plan, its efforts to encourage and facilitate public awareness of air quality issues, and its efforts to encourage employees to take personal voluntary actions.

- Best Practices in Pesticide Application: The Park Authority fully supports this measure and has already implemented an integrated pest management (IPM) program at the golf facilities and athletic field complexes. The Park Authority's approach to select pesticide applications is one of prevention rather than curative. This approach greatly reduces the amount of product (VOC emissions) required to keep turf healthy and allows the IPM program to be more effective.
- Alternative Fueled Vehicle Purchases: The County already favors purchase of hybrid-drive vehicles when appropriate for replacement of vehicles being retired. In addition to the 27 hybrid vehicles that have already been purchased, it is anticipated that the County will purchase an additional 30 hybrid vehicles by May 2005.

ADDITIONAL COUNTY COMMITMENTS TO AIR QUALITY BEST PRACTICES:
On May 9, 2003, the County's Environmental Coordinating Committee (ECC) in collaboration with the Environmental Quality Advisory Council (EQAC) formally chartered an Air Quality Subcommittee that would be tasked to prepare recommendations for the ECC on local and regional air quality issues, initiatives and program opportunity/requirements in support of the regional air quality planning efforts and the County Executive's February 12, 2003, "Declaration on Air Quality Leadership" statement.

The Air Quality Subcommittee is focusing its efforts on developing a Countywide Air Quality Management Plan that will include an education and notification process. This Plan is currently being developed and is being coordinated with the regional air quality planning efforts.

In addition, Fairfax County has taken the lead on one of the proposed control measures identified by MWAQC in the August 13th revised SIP. This measure is a rule

effectiveness for enhanced enforcement of open burning restrictions. Open burning restrictions include such items as trees, shrubs, and brush from land clearing activities, trimmings from landscaping, and household or business trash during the ozone season. The survey will be applied to the Northern Virginia counties that are located in the ozone non-attainment area. The benefit of conducting the survey will be to provide, if necessary, Northern Virginia jurisdictions with information that can be used to develop a plan to improve the rule effectiveness from the currently assumed level of 80 percent in the current SIP to 95 percent. This would not only support our goal of cleaner air, but would provide additional emissions benefits of up to 0.5 tons per day that could be used in the final SIP.

FISCAL IMPACT:
The gas can replacement program proposed is not expected to exceed $5,000. The cost of can replacement will be absorbed with current appropriations.

Based on information provided by MWAQC staff, low-VOC paint is readily available and Facilities Management Division staff has indicated that there will be no additional cost to purchase this paint.

The Board of Supervisors approved $2 million as part of the FY 2005 Carryover Budget to begin the diesel retrofit program. In addition, funds in the amount of $1.5 million have been made available in fund 100, County Transit Systems for the retrofit of the CONNECTOR buses with the catalyzed diesel particulate filters.

The Episodic bans should not result in any increased cost to the County. There is no cost to the County for encouraging telework on Code Red days.

The anticipated purchase of an additional 30 alternative fueled vehicles by May 2005 is partially funded through the Department of Vehicle Services vehicle replacement fund for FY2004. Any obligation of Fairfax County with respect to this program is contingent upon the appropriation for fiscal year 2005 by the Fairfax County Board of Supervisors of funds to continue support of the vehicle replacement program. The approximate cost differential for the purchase of a hybrid vs. non-hybrid is $6,333.

ENCLOSED DOCUMENTS:
Attachment I: Draft commitment letter to Robert G. Burnley, Director, Department of Environmental Quality, transmitting the County's commitment for the proposed voluntary control measures as shown in this Board Item.

Board Agenda Item
November 17, 2003

STAFF:
Robert A. Stalzer, Deputy County Executive
Young Ho Chang, Director, Department of Transportation
James D. Gorby, Director, Department of Vehicle Services
John Wesley White, Director, Department of Public Works and Environmental Services
Michael Kane, Director, Park Authority
Kambiz Agazi, Environmental Coordinator
Tom Biesiadny, Chief, Coordination and Funding Section, Department of Transportation
Dave Duval, Quality Control Superintendent, Department of Vehicle Services

Maryland Department of Transportation
The Secretary's Office

Robert L. Ehrlich, Jr.
Governor
Michael S. Steele
Lt. Governor
Robert L. Flanagan
Secretary
Trent M. Kittleman
Deputy Secretary

December 4, 2003

The Honorable Kendl P. Philbrick
Acting Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore MD 21230

Dear Secretary Philbrick:

As you are aware the Metropolitan Washington region is preparing a Mobile 6 based Rate of Progress (ROP) State Implementation Plan (SIP). In order to meet the emission reduction requirements necessary for the Mobile 6 ROP SIP governments and agencies in the Washington region have been asked to identify commitments they can make to improve air quality. The Maryland Department of Transportation (MDOT) has reviewed its programs and is prepared to make the following commitment to regional air quality and emission reductions that is credible for SIP development purposes.

The Department is pleased to inform you that we hereby commit to continued implementation of ultra low Volatile Organic Compounds (VOc) paint in its street-marking program. This program represents a continued commitment to the use of approximately 120,600 gallons of paint with a VOc content below what is required under the State of Maryland's Architectural and Industrial Maintenance Coatings (AIM) rule. MDOT also commits to provide an annual accounting of the use of these paints and coatings. Details of this commitment are provided in the attachment.

If you have any questions or require additional information regarding the commitment, please do not hesitate to contact Mr. Howard Simons at 410-865-1296 or by email at hsimons@mdot.state.md.us.

Sincerely,

Robert L. Flanagan
Secretary

Attachments
cc: Ms. Marsha Kaiser, Director, Office of Planning and Capital Programming, Maryland Department of Transportation
Mr. Howard Simons, Manager, Air Quality Programs, Office of Planning and Capital Programming, Maryland Department of Transportation

My telephone number is 410-865-1000
Toll Free Number 1-888-713-1414 TTY User Call Via MD Relay
7201 Corporate Center Drive, Hanover, Maryland 21076

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Office of the Chairman, Prince George's County Planning Board

301-952-3561

December 4, 2003

Mr. Kendl P. Philbrick, Acting Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Dear Mr. Philbrick:

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

Working through the Metropolitan Washington Air Quality Committee (MWAQC), I am pleased to submit to you the commitments offered by The Maryland National Capital Park and Planning Commission, Prince George's County, to improve air quality. These proposals require action by the Commission, not only in its role as a local government agency responsible for implementing public programs to reduce air pollution, but also as a large corporate entity whose actions will impact regional air quality. We take our responsibilities very seriously, and we believe that meeting the Federal air quality standard for ozone is one of our highest priorities.

As a result, I am pleased to inform you that The Maryland National Capital Park and Planning Commission, Prince George's County, hereby commits to the following as part of the Voluntary Control Measures Program:

- Voluntarily replace all gas cans owned by the Commission, Prince George's County, by April 2005 (estimated 250 gas cans).
- Low VOC procurement policies are permanent for interior painting and will be effective and in use by the Commission, Prince George's County, for all its painting needs by May 2005.
  Implement an episodic ban on all Code Red Ozone Action Days on the use of lawn, garden and diesel-powered equipment, beginning March 2004.

- The Commission, Prince George's County, will participate in the Montgomery County Wind Energy Contract and will purchase five percent of its energy as wind energy, effective July 2004.
- Implement an episodic ban on all Code Red Ozone Action Days on refueling of the Commission's Prince George's County vehicles, beginning May 2005.
- Continue to implement Best Practices in the use of indoor pesticide and herbicide applications (activities already in place).
  Continue to participate in a Voluntary Pesticides Reduction Program (activities already in place) for indoor and outdoor use.
- Increase by two the number of Alternative-Fueled Vehicles in the Commission's Prince George's County fleet, by July 2004.

These programs represent a permanent commitment to emissions-reducing behavior. The Commission, Prince George's County, also commits to provide an annual accounting of the implementation of these voluntary measures to enable validation of the credit taken in the State Implementation Plan. Details of the Commission's Prince George's County commitment to these programs are available at your request.

If you have any questions or require additional information regarding this commitment, please contact Wally Stephenson, Division Chief, Maintenance and Development Division, M-NCPPC Department of Parks and Recreation, Prince George's County (301-780-2445).

Sincerely,

Elizabeth M. Hewlett
Chairman

cc: The Honorable Tony Knotts, Chairman
Prince George's County Council
The Honorable Thomas E. Dernoga, Chair, Technical Advisory Committee
Metropolitan Washington Air Quality Committee
The Honorable Phil Mendelson, Chair
Metropolitan Washington Air Quality Committee
Joan Rohlfs, Air Quality Coordinator
Metropolitan Washington Council of Governments
Donna M.P. Wilson, Esq., Director
Prince George's County Department of Environmental Resources
Marye Wells-Harley, Director, M-NCPPC Department of Parks and Recreation,
Prince George's County

Beth Lowe

From: Richmond, Mary [Mary.Richmond@montgomerycountymd.gov]
Sent: Tuesday, December 02, 2003 3:09 PM
To: Beth Lowe
Cc: Caldwell, Jim; Janashek, Shelley; Scavia, Ellen; Genetti, Albert
Subject: FW:

-----Original Message-----
From: Duncan, Douglas
Sent: Friday, November 07, 2003 11:17 AM
To: 'kphilbrick@mde.state.md.us'
Cc: 'PMENDELSON@dccouncil.washington.dc.us'
Subject:

Dear Mr. Philbrick:

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

The elected leadership of the Washington region is developing proposals to improve air quality. These proposals require action by Montgomery County, not only in the role of a local government responsible for implementing public programs to reduce air pollution, but also as a large corporate entity whose actions will impact regional air quality. Montgomery County takes these responsibilities very seriously. We believe that meeting the federal air quality standard for ozone is a high priority. Though we are acting in conjunction with the regional efforts being undertaken by the Metropolitan Washington Air Quality Committee, we must also lead the way for others to follow.

As a result, I am pleased to inform you that Montgomery County hereby commits to implementing the following programs in 2004:

Project Category	Commitment	NOx Reduction	VOC Reduction
Regional Wind Energy Purchase Program	5% or 28,000,000 kWh/yr	0.05 tpd	NA
Alternative Vehicle Purchase Program	5 hybrid sedans FY05 and FY06; beginning FY07, 25 hybrid sedans and 10 CNG pickup trucks per year	0.0169 tpd	0.0075 tpd
Gas Can Replacement	288 Cans		.0246 tpd
Episodic Reduction- Lawn and Garden Equipment	Code Red Days		0.062 tpd
Episodic Reduction – Paint Striping	Code Red Days		.0016 tpd
Total		**0.0669 tpd**	**0.0957 tpd**

These programs represent a permanent commitment to emissions-reducing behavior. The emission reductions resulting from these programs will be reserved for use in the SIP. Montgomery County also commits to

provide an annual accounting of the implementation of these measures to enable validation of the credit taken for this voluntary measure in the Washington region's SIP. Details of Montgomery County's commitment to these programs are provided in the documents attached to this Email.

If you have any questions regarding this commitment, please contact Mary C. Richmond at 240-777-7758 or <mary.richmond@montgomerycountymd.gov>.

Sincerely,

Douglas Duncan
County Executive

cc: The Honorable Phil Mendelson, Chair, Metropolitan Washington Air Quality Committee

OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Douglas M. Duncan
County Executive

October 7, 2003

The Honorable Phil Mendelson, Chairman
Metropolitan Washington Air Quality Committee
777 North Capitol Street, N.E, Suite 300
Washington, D.C., 20002-4290

Dear Chairman Mendelson:

With the metropolitan Washington region designated as a "severe" non-attainment area under the Clean Air Act, Montgomery County is aggressively evaluating additional steps we can take to help the region reduce harmful pollutant emissions. While I am proud of our progressive programs that are making a difference, all the jurisdictions in the region have agreed there is much that remains to be done.

Therefore, I am pleased to notify you that Montgomery County will be the first jurisdiction in the Washington Metropolitan region to commit to purchasing five percent of our energy requirements from wind energy beginning July 2004. By March 2004, we will issue a Request for Proposals for this energy purchase and are inviting all other local and state jurisdictions to join us in this contract.

During the August Metropolitan Washington Air Quality Committee (MWAQC) meeting, MWAQC adopted a resolution to evaluate and develop strategies for emissions reductions, including purchase of wind power – and we are stepping up to meet this challenge. Our wind energy purchase will allow Montgomery County to cost-effectively displace emissions of nitrous oxides, mercury, particulate matter, greenhouse gases, and acid rain precursors from coal-fired power plants in our area. The result will not only benefit the quality of the air we breathe, but also improve water quality. And, by using a more diverse energy source, we are moving towards the goal of becoming a more sustainable community

Montgomery County has been able to identify energy conservation measures that will result in sufficient savings to pay for any higher costs associated with our wind power purchase. I am volunteering my staff to provide an educational seminar on how other jurisdictions may also use energy conservation to displace price premiums. I urge all the Council of Governments jurisdictions to join us in purchasing wind energy so we can improve the health and quality of life for all our residents.

If you have any questions or need additional information regarding this measure, please call Mary Richmond at (240) 777-7758.

Sincerely,

Douglas M. Duncan
County Executive

Enclosure Wind Energy Resolution

Resolution No:
Introduced: January 21, 2003
Adopted: March 18, 2003

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Councilmembers Leventhal, Subin, Silverman, Perez, Praisner, Andrews, Denis, Floreen, and Knapp

Subject: County Energy Policy, clean and renewable energy, energy efficiency

Background

The State of Maryland deregulated the electric utility industry on July 1, 2000, enabling electric customers to shop for competitive power. Montgomery County took a leadership role by being one of the first entities in the State to conduct joint procurement of electricity supply, and continues to take a proactive approach to ensuring that the interests and concerns of County residents are met in a competitive electricity marketplace.

2 The Montgomery County joint procurement consists of an aggregated load of sufficient size to potentially have influence in the electricity marketplace on the development of clean and renewable resources.

3 It is the policy of Montgomery County to "Continually improve the efficient use of all energy resources in order to ensure a future with a secure and sustainable energy supply" and to "look to increase the amount of clean and renewable energy purchased in a competitive marketplace." (County Energy Policy, Resolution 14-427, February 8, 2000)

4. Montgomery County is a participant in the international Cities for Climate Protection campaign, and as such has resolved to take local action to mitigate the emission of greenhouse gasses that cause global climate change. (Resolution 14-582, July 11, 2000)

5 The Washington region faces a severe challenge: meet federal air quality standards or lose federal funding for transportation. It is in the interest of Montgomery County residents and businesses to reduce the emissions of nitrogen oxides and other air emissions that harm public health and the environment in as cost-effective a manner as possible.

There exists a general consensus that electricity generated using "zero emissions" sources such as solar, wind, and certain small low-impact hydroelectric sources is clean, renewable, and has fewer environmental consequences than fossil fuel generated power.

Montgomery County recognizes that national energy security and the stability of our electricity transmission and distribution infrastructure can be enhanced through increased development of distributed renewable energy resources.

8 Very recently, the potential for the purchase of wind power by the County became available, with wind generators located in sufficient geographic proximity to provide air quality benefits within the local air shed.

9. Montgomery County is a member of the EPA's Green Power Partnership program, and as such has made a commitment to acquire renewable energy resources in the amount of 11,300,000 KWh during the coming year. (Green Power Partnership Letter of Intent, September 16, 2002)

10. Montgomery County expects to be able to offset the cost associated with a price premium for clean renewable energy by improving energy conservation and by ensuring the effectiveness of existing energy efficiency efforts through impartial third-party audits of a sample of County buildings.

Chapter 18A, section A-4 of the County Code states that the Council can initiate an amendment to the County Energy Policy at any time and can approve an amendment after giving the Executive 30 days to submit written comments and after holding a public hearing following at least 30 days notice to the public.

Action

The County Council of Montgomery County, Maryland approves the following Resolution. The County Energy Policy as approved on February 8, 2000 in resolution 14-427 is amended by adding the following paragraphs:

1. Montgomery County agencies, as an element of an aggregated cooperative competitive procurement of electric supply, will make best efforts to ensure that a portion of the electricity purchased in a competitive marketplace be derived from clean renewable energy generation sources such that:

a. at least 5% of the County's total annual electric load is supplied by clean renewable energy generated power; the County Council, in conjunction with the County Executive, may, at some future date, alter or adjust the minimum percentage of clean renewable energy required in electricity procurements;

b. the clean renewable energy generation purchased will be produced within the air shed affecting Montgomery County and within a geographic area in sufficient proximity to Montgomery County to provide local air quality benefits to the County;

the clean renewable energy generation shall include power that is generated using zero-emissions new renewable energy resources, as defined by the "Green-e" Renewable Electricity Certification Program, such as solar energy, wind energy, and geothermal energy, that meets the eligibility requirements of the U.S. Environmental Protection Agency's Green Power Partnership Program;

d In the case of wind energy, the generation will come from a wind power facility that has been examined and approved by the Maryland Department of Natural Resources (DNR), or equivalent entities in other states, in regards to potential bird impacts, and where DNR or its equivalent has found that the impacts are likely to be low. The facility will need to remain in compliance with any conditions and mitigation obligations required by the Maryland Public Service Commission

or its equivalent in other states. For those wind facilities constructed after the effective date of this resolution, the facilities must conduct studies as established by the guidelines of the National Wind Coordinating Committee for protecting birds and other wildlife, to the satisfaction of the DNR or its equivalent in other states.

the purchase of clean renewable energy generated power will begin at the earliest date practicable, and will continue through future electricity procurements;

2. Montgomery County will develop an "Energy Wise Offices" program to encourage County employees to reduce energy consumption through behavioral modification.

a. The "Energy Wise Offices" program will consist of outreach and education for County government employees, to be conducted by the Department of Environmental Protection. In order to evaluate program effectiveness and promote "ownership" of energy costs by individual departments, each department and/or facility will be provided with annual reports of energy usage and energy costs.

b. The program will include such actions as turning off lights in unoccupied areas, fully enabling energy saving features on computers and office equipment, shutting down equipment that is not in use overnight or over weekends, and using appropriately sized fleet vehicles.

3. As a pilot program, in order to gather information and support efforts to ensure that County buildings are designed, constructed and maintained in as energy efficient a manner as possible, the County will procure the services of an energy auditor to assess the status of energy efficiency of three County buildings which are large energy consumers. The audits will also identify potential cost effective energy saving improvements. The results of the audits will be reported to the County Council. The County Council may, at some future date, expand the number of buildings subject to audit.

This is a correct copy of Council action.

Mary A. Edgar, CMC
Clerk of the Council

THE PRINCE GEORGE'S COUNTY GOVERNMENT

OFFICE OF THE COUNTY EXECUTIVE

Jack B. Johnson
County Executive

December 4, 2003

Mr. Kendl P. Philbrick
Acting Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Dear Mr. Philbrick

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

Working through the Metropolitan Washington Air Quality Committee (MWAQC), I am pleased to submit to you the commitments offered by Prince George's County to improve air quality. These proposals require action by the County, not only in its role as a local government responsible for implementing public programs to reduce air pollution, but also as a large corporate entity whose actions will impact regional air quality. We take our responsibilities very seriously and we believe that meeting the 8-hour Federal air quality standard for ozone is one of our highest priorities.

As a result, I am pleased to inform you that Prince George's County hereby commits to the following as part of the Voluntary Control Measures Program:

Voluntarily replace all gas cans owned by the County, by July 2004 (estimated 100 gas cans).
Continue to use low-volatile organic compound paints for all interior painting projects (activities already in place).
Implement an episodic ban on all Code Red Ozone Action Days on the use of lawn, garden and diesel-powered equipment, beginning May 2004.

14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772
(301) 952-4131
TDD (301) 985-3894

Implement an episodic ban on all Code Red Ozone Action Days on traffic-marking activities, beginning May 2004.
Implement an episodic ban on all Code Red Ozone Action Days on refueling of County vehicles, beginning May 2004.
Continue to implement Best Practices in the use of indoor pesticide and herbicide applications (activities already in place).
Continue to participate in a Voluntary Pesticides Reduction Program (activities already in place).
Increase by three the number of Alternative-Fueled Vehicles in the County's fleet, by July 2004.

These programs represent a permanent commitment to emissions-reducing behavior. Prince George's County also commits to provide an annual accounting of the implementation of these voluntary measures to enable validation of the credit taken in the State Implementation Plan. Details of the County's commitment to these programs are available at your request. The Maryland-National Capital Park and Planning Commission for Prince George's County has also participated in our planning effort. The Commission's representative will send her commitments to you directly.

If you have any questions or require additional information regarding this commitment, please contact Donna M.P. Wilson, Esq., Director, Department of Environmental Resources, at (301) 883-5812.

Sincerely

Jacqueline F. Brown, Ph.D.
Chief Administrative Officer

cc The Honorable Peter A. Shapiro, Chairman
Prince George's County Council
The Honorable Thomas E. Dernoga, Chair, Technical Advisory Committee
Metropolitan Washington Air Quality Committee
The Honorable Phil Mendelson, Chair
Metropolitan Washington Air Quality Committee
Joan Rohlfs, Air Quality Coordinator
Metropolitan Washington Council of Governments
Donna M.P. Wilson, Esq., Director, Department of Environmental Resources

COUNTY OF PRINCE WILLIAM

OFFICE OF EXECUTIVE MANAGEMENT
1 County Complex Court, Prince William, Virginia 22192-9201
(703) 792-6600 Metro 631-1703 FAX: (703) 792-7484

Craig S. Gerhart
County Executive

BOARD OF COUNTY SUPERVISORS
Sean T. Connaughton, Chairman
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Ruth T. Griggs
Mary K. Hill
John D. Jenkins
Edgar S. Wilbourn, III

December 1, 2003

Robert Burnley, Director
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219

Dear Director Burnley:

The Metropolitan Washington region faces a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area under the one-hour ozone standard, but our poor air quality also threatens the health of everyone living and working in this region. In addition to causing increased respiratory and other public health problems for our citizens, failure to address our air quality problems could result in the imposition of sanctions that would jeopardize the expansion of our region's highway and mass transit systems and adversely affect the economic well being of our region.

The elected leaders of the Washington region are developing proposals to improve air quality. These proposals require action by Prince William County, not only in the role of a local government agency responsible for implementing public programs to reduce air pollution, but also as a large entity whose actions will impact regional air quality. Prince William County takes these responsibilities very seriously, as we believe that meeting the federal air quality standard for ozone is a high priority.

As a result, I am pleased to inform you that Prince William County hereby commits to implementing the following programs by the dates shown:

Voluntary Gas Can Replacement, 100 Gas Cans Replaced by May 2005 at a total cost of $500.

These programs represent a commitment to emissions-reducing behavior. The emission reductions resulting from these programs will be reserved for use in the SIP. Prince William County also commits to provide an annual accounting of the implementation of these measures to enable validation of the credit taken for this voluntary measure in the Washington region's SIP.

If you have any questions or require additional information regarding this commitment, please contact Rick Canizales or Tom Blaser at (703) 792-6825.

Sincerely,

Craig S. Gerhart
County Executive

cc: Board of County Supervisors
Assistant County Executive – SLR
Public Works Director
Tom Blaser, Transportation Division Chief
Honorable Phil Mendelson, Chair, Metropolitan Washington Air Quality Committee

Virginia Railway Express

1500 King Street • Suite 202 • Alexandria, Virginia 22314-2730 • TEL: (703) 684-1001 • FAX: (703) 684-1313 • www.vre.org • E-MAIL: gotrains@vre.org

Sharon Bulova
Chairman

July 3, 2003

The Honorable Peter Shapiro, Chairman
National Capital Region Transportation Planning Board
777 North Capitol Street, N.E., Suite 300
Washington, D.C. 20002-4290

Dear Chairman Shapiro:

In your May 21, 2003 letter to Phil Mendelson, Chairman of the Metropolitan Washington Air Quality Committee (MWAQC) concerning the inclusion of revised MOBILE6 – based mobile emissions budgets you reported TPB's support of including specific new Transportation Control Measures (TCMs) in the draft regional air quality plan. The letter references letters from responsible implementing agencies that provide specific additional TCMs and vehicle-technology and fuel-based measures. These measures were included in the draft air quality plan MWAQC released for public comment on May 28, 2003.

In keeping with this commitment to MWAQC the Virginia Railway Express (VRE) is pleased to recommend including emissions reductions from the following project in the region's final air quality plan as appropriate.

No.	Project Category	2005 Emissions Reduction	
		VOC (tons/day)	NOx (tons/day)
1	Use of Auxiliary Power Units for 13 locomotives / train cars	0.00	0.10

Consistent with VRE's commitment to the above measure, the purpose of this letter is to confirm that VRE is using APU's to support the needs of 13 locomotives and train sets. As such, the estimated emissions reduction from the measure will be available by 2005 for meeting rate-of-progress, attainment, or contingency measure requirements.

If you have questions or need additional information regarding this measure, please call Tamara Ashby at (703) 684-1001.

Sincerely,

Pete Sklannik Jr.
Chief Operating Officer

cc: Tamara Ashby, VRE

Additional Documentation for Voluntary Measure Calculations

The Virginia Remote Sensing Device Program

The Commonwealth of Virginia will begin a continuous remote sensing device (RSD) program in Northern Virginia in the spring of 2004, encompassing the counties of Fairfax, Loudoun, Arlington, Prince William, Stafford, and the cities of Alexandria, Falls Church, Manassas, Manassas Park, and Fairfax. The goals of the RSD program are to:

1. Identify high-emitting light duty vehicles and trucks operating in the program area for out-of-cycle verification testing and subsequent repair,
2. Use RSD for "clean screening" of very clean vehicles, enabling these vehicles to avoid the regularly scheduled biennial emissions inspection test,
3. Identify Virginia-registered vehicles regularly driving in the I/M area that have not undergone an emissions inspection at a Virginia Certified Emissions Inspection Facility,
4. Evaluate fleet emissions and I/M program effectiveness.

The RSD program is expected to generate emission reductions through 4 mechanisms. First, an emission benefit will occur by requiring vehicles that fail the RSD test to undergo repair and pass out-of cycle I/M testing. The program is being devised so the this benefit will far outweigh any disbenefit associated with clean screening. Second, an emission benefit will occur by requiring high emitting vehicles garaged outside of the program area to undergo I/M testing if they are detected by RSD regularly driving into the area. Third, the Virginia Department of Environmental Quality (DEQ) believes that RSD data may be used to document an under-prediction of I/M benefits by the Mobile6 emissions model, as was determined in a pilot RSD program completed in 2002 by comparing vehicle emissions in a non-I/M area with those in the program area. Last, DEQ believes that an emission benefit will occur through a deterrent effect as people become aware of the RSD program.

DEQ will hire a contractor to run the RSD program in Virginia, and projects that 600,000 unique Virginia-registered vehicles will be tested by the RSD program each year; 480,000 from within the Northern Virginia program area and 120,000 from outside the program area. DEQ expects 2% of these vehicles to fail the RSD test as high emitters, thereby requiring out-of-cycle testing. In addition, the pilot program found that approximately 20% of the vehicles traveling in Northern Virginia were garaged in Virginia jurisdictions located outside of the program area, and could therefore require I/M testing if found to be high emitters. The Virginia Department of Motor Vehicles (DMV) will be enforcing the program by issuing a Notice of Violation to high emitting vehicle owners requiring their vehicle pass an out-of-cycle ASM emission test. A fine will be issued to owners who do not comply with the Notice of Violation in a timely manner.

Although DEQ believes the RSD program will result in substantial emission reductions throughout the Northern Virginia program area, DEQ is not committing to any emissions reductions as a voluntary measure in this severe area SIP at this time. DEQ does intend

to quantify the emission benefits associated with the RSD program and may take credit for appropriate emissions reductions in a future SIP.

Since Mobile6 does not currently have the capability of estimating the benefits of RSD programs, emission reductions will be based on a correlation between RSD and ASM emission levels, as determined by our contractor. An outline is attached which shows a proposed methodology to document emissions benefits from the RSD program. It includes estimates of RSD program benefits based on the results of the RSD pilot program completed in 2002.

EMISSIONS REDUCTIONS ESTIMATES FOR USING REMOTE SENSING DEVICES (RSD) IN VIRGINIA

1.0 PURPOSE

1.1 Estimate Emission Reductions from the RSD Program in Northern Virginia

1.2 Document that Northern Virginia's I/M Program Achieves Greater Emissions Reductions than Estimated by MOBILE6

2.0 EMISSION REDUCTIONS FROM USING RSD TO IDENTIFY OFF-CYCLE HIGH EMITTERS

2.1 Assumptions

- 600,000 unique Virginia Registered vehicles are tested by RSD each year. 480,000 registered in I/M area. 120,000 registered outside I/M area. (Based on Northern VA RSD study)
- 2% fail as gross polluters. (Based on Northern VA RSD study)
- Emissions reductions are based on correlation between RSD and ASM emissions levels. (Based on Northern VA RSD study)
  - Emissions levels before repair based on average ASM emissions for group that failed RSD, was in dirtiest 75% profile and failed ASM.
  - Emissions levels after repair based on average ASM emissions for group that failed RSD, was in dirtiest 75% profile and passed ASM.
  - ERG (Radian) conversion equations were used to convert ASM levels to g/mi.
- Benefits last 1 year for in-program vehicles; 2 years for out-of-program vehicles.

2.2 Emission Reduction Estimates

- **Emissions Before/After Repair**

Pollutant	ASM Before Repair (ppm)	ASM After Repair (ppm)	g/mi Before Repair	g/mi After Repair
HC	149.00	75.60	3.16	1.69
NOx	1418.94	679.16	2.67	1.82

- **Total Daily Benefit (Summer Ozone Period)**

Parameter	In Program	Out of Program	Total
# of Vehicles	384,000	96,000	480,000
Fail Rate	2%	2%	2%
# Fail	7680	1920	9600
HC Reduction g/mi	1.47	1.47	1.47
NOx Reduction g/mi	0.85	0.85	0.85
HC+NOx Reduction g/mi	2.32	2.32	2.32
Annual Miles per vehicle	12000	12000	12000
Yrs Benefit	1	2	
#/Day (HC+NOx)	1291.14	645.58	1936.72

3.0 DOCUMENTING THAT NORTHERN VIRGINIA'S I/M PROGRAM ACHIEVES GREATER EMISSIONS REDUCTIONS THAN ESTIMATED BY MOBILE6

Procedure

- Collect RSD emission results on I/M and Non I/M VA Registered Vehicles. Collect results on approximately 120,000 vehicles in non I/M areas and 375,000 vehicles in I/M areas.
- Remove all results taken during out-of-range vehicle specific power (VSP) and cold start conditions.
- Compile results by vehicle type, model year and make. ***Adjusting by model year and make will help compensate for socio-economic differences in the two areas.***
- Compile vehicle registration data and generate an average distribution for Virginia by vehicle type, model year and make.
- Compute weighted averages (by vehicle type, model year and make) of RSD HC, CO, and NOx emission rates for I/M and non-I/M areas.

- Calculate percent reduction from I/M.

Advantages:

Method uses independent emissions tests on an unbiased sample to evaluate VA's I/M program.

Method accounts for the following factors:

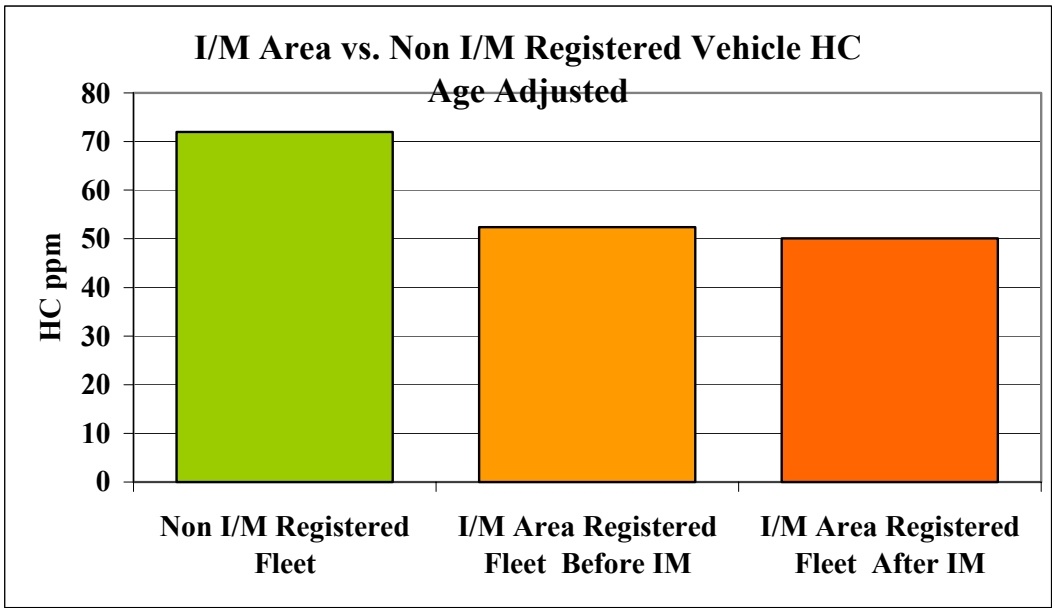
- Long-term emission benefits – Benefits from vehicles fixed prior to last I/M cycle
- Pre-inspection repairs
- Vehicle retirement due to I/M

Disadvantages:

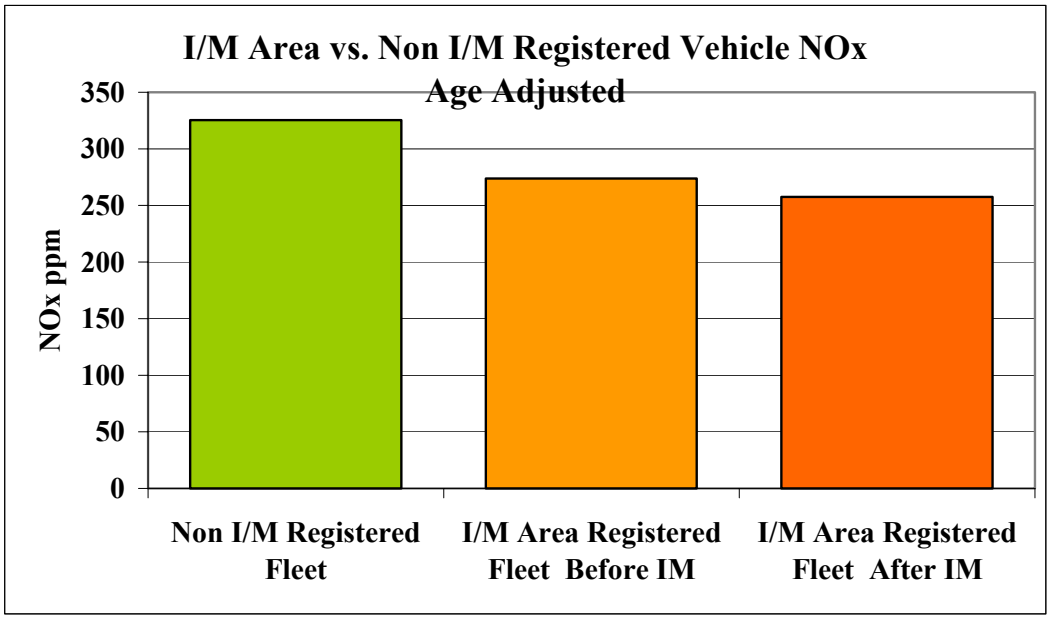
It is difficult to relate RSD measurements to g/mi.

Example Results

Age Adjusted I/M vs. Non-I/M HC



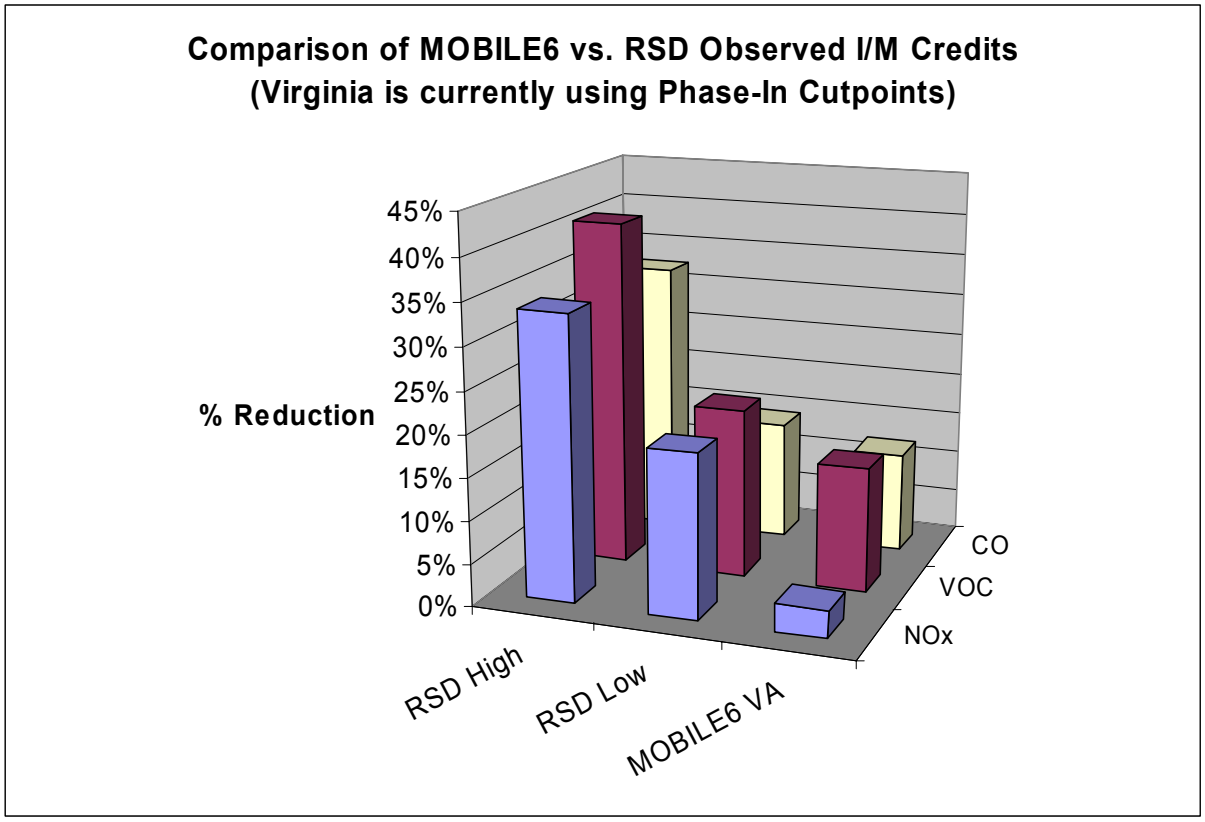
Age Adjusted I/M vs. Non-I/M NOx



MOBILE6 I/M Credits vs. RSD Observed I/M Emission Reductions

Pollutant	% Reduction Based on RSD		% Reduction Based on MOBILE6
	Registered Fleet	Model Yr Adjusted	Phase-In Cut Pts
VOC	41%	20%	15%
CO	33%	14%	12%
NOx	34%	19%	3.3%

MOBILE6 vs. RSD Observed Emission Reductions



RESOURCE SYSTEMS GROUP INCORPORATED

PROSPECTIVE ENVIRONMENTAL REPORT FOR CLIPPER WIND POWER

Prepared for Clipper Wind Power

Under Contract with Environmental Resoucres Trust

April 2003

331 Olcott Drive, White River Junction, Vermont 05001

TABLE OF CONTENTS

1.0 INTRODUCTION

The prospective Clipper Wind Power Environmental Report for Maryland documents savings in air emissions from using Clipper Wind Power, which replaces power that would otherwise have been generated to supply the demand. This report is based on the expected sale of Clipper Wind Power and the air emissions of power plants where generation will be displaced by the use of Clipper Wind Power.

This report is preliminary and is intended to be indicative of the emissions savings from the use of wind power beginning in 2004 based on current and recent historical data as well as estimates of displacement provided by load serving entities.

2.0 METHODOLOGY

There are no significant air emissions from the generation of wind power, therefore the savings estimate is based on the combined air emissions of the generation displaced by Clipper Wind Power. Air emission calculations are based on the direct emissions only and do not consider emissions associated with the extraction or transportation of fuels or disposal of wastes.

Based on information provided by load serving entities in the PJM area, the power displaced by Clipper Wind Power is generated in the PJM and PJM West areas. Although nuclear power is a significant source of electricity in this area, no nuclear power is displaced because nuclear operating costs are so low that they are operated to the maximum extent possible and are not displaced by any additional sources. Similarly there are small amounts of hydro-power and other renewable sources in the region but none will be displaced by wind power.

Displacement occurs among a set of plants that are on a variable dispatch schedule so that the actual generation rises and falls with the demand. Based on information provided by load serving entities, the generation displaced in PJM is from coal and natural gas-fired units. Some of the coal plants may have a base-load capacity and a variable dispatch capability as well. In the PJM West region, all of the variable dispatch generation is provided by coal units. The load-serving entities have indicated that generation from oil-fired facilities is not displaced by wind in PJM or PJM West.

Figure 1 shows the location of plants that are used in the displacement calculations and Table 1 lists the plants with their primary fuels. The three groupings in Table 1 represent the three displacement areas considered in the analysis. Table 1 also includes a column entitled 'Nameplate Capacity (MW)'. This column refers to the maximum amount of power a plant could generate at 100% load. This is the capacity of units where generation may be displaced and does not necessarily include all units at that location.

Table 1: Plants in Each Grouping

Groupings			State	Plant Name	Plant Code (Orispl)	Primary Fuel	Nameplate Capacity (MW)
Maryland, Pennsylvania, and W. Virginia Group	Maryland Group		MD	Notch Cliff	1555	Natural Gas	144
			MD	Perryman	1556	Natural Gas	405
			MD	Riverside	1559	Natural Gas	244
			MD	Westport	1560	Natural Gas	122
			MD	Domino Sugar Corp	54795	Natural Gas	10
			MD	Panda Brandywine L P	54832	Natural Gas	289
			MD	Brandon Shores	602	Coal	1370
			MD	C P Crane	1552	Coal	416
			MD	H A Wagner	1554	Coal	1059
			MD	Chalk Point	1571	Coal	2647
			MD	Dickerson	1572	Coal	930
			MD	Morgantown	1573	Coal	1548
		PJM West - Coal Only Group	MD	R Paul Smith Power Station	1570	Coal	110
			MD	Aes Warrior Run	10678	Coal	229
			MD	Luke Mill	50282	Coal	65
			WV	North Branch	7537	Coal	80
			WV	Albright	3942	Coal	178
			WV	Fort Martin	3943	Coal	1152
			WV	Harrison	3944	Coal	2052
			WV	Rivesville	3945	Coal	110
			WV	Mt Storm	3954	Coal	1681
			PA	Hatfield's Ferry	3179	Coal	1728
			PA	P H Glatfelter Co	50397	Coal	110
			PA	PPL Brunner Island	3140	Coal	1567
			PA	Hunterstown	3110	Natural Gas	58.8
			PA	Mountain	3111	Natural Gas	53.2
			PA	York Cogen Facility	54693	Natural Gas	69
			PA	Allegheny Energy Unit 8 & 9	55377	Natural Gas	88

Figure 1: Location of Coal and Natural Gas Plants included in Analysis.

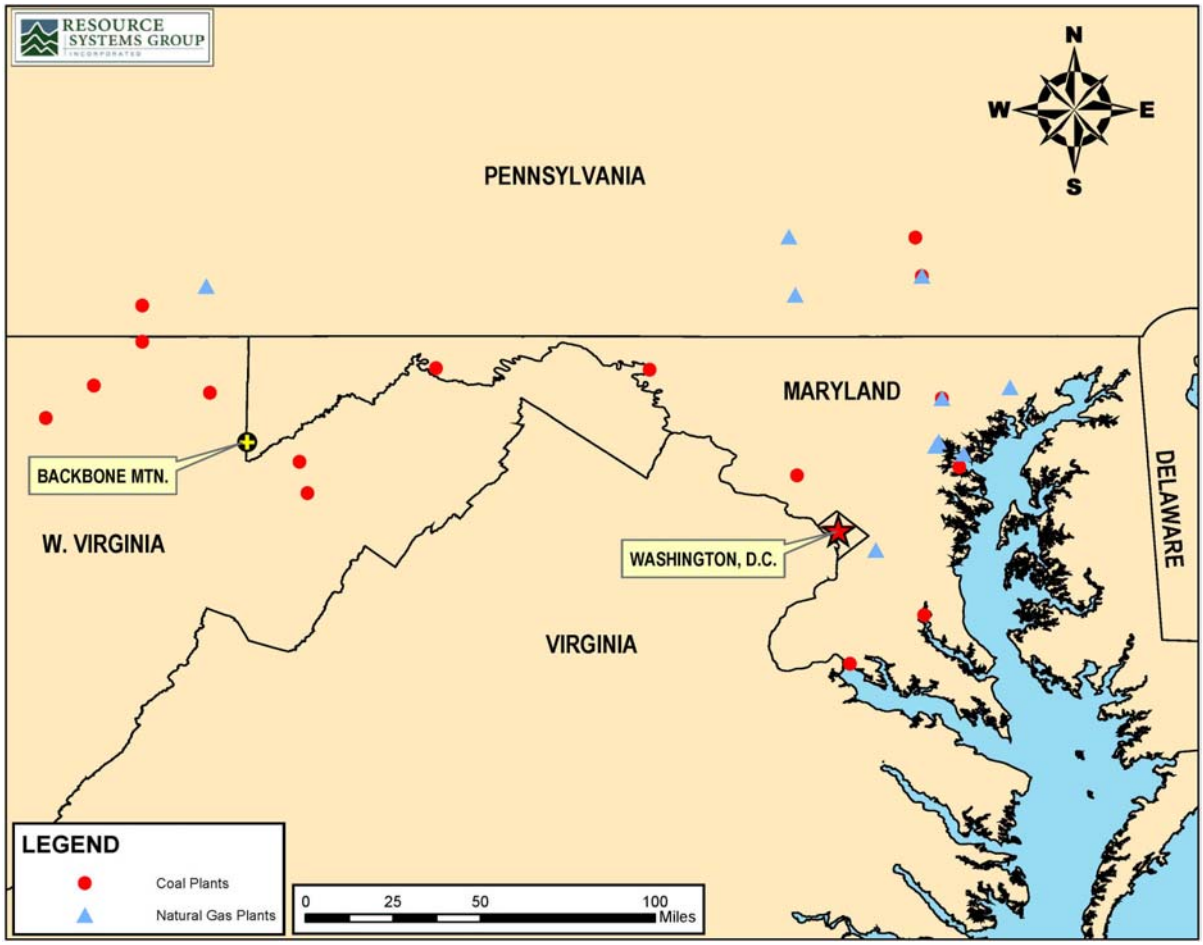


Figure 1 also shows the location of the proposed Clipper Wind site labeled "Backbone Mtn."

3.0 RESULTS

The displaced emissions for carbon dioxide, nitrogen oxides and sulfur dioxide from all these plants and from a subset of plants in Maryland and PJM West are given in Table 2. These are given in lb/MWh. Emissions displacement or savings for the complete project can be estimated by multiplying by the expected total wind generation.

Table 2: Displaced Emissions

Pollutant	MD Group	MD, PA, and WV Group	PJM West Coal Only Group
	lbs/MWh	lbs/MWh	lbs/MWh
CO_2	1329.08	1374.60	2113.18
NOx	3.06	3.13	5.72
SO_2	8.34	8.83	17.66

Displaced emissions are based on the continuous emission monitors (CEM) for carbon dioxide, nitrogen oxide and sulfur dioxide from those plants in the displacement group. The average displaced emissions are calculated from the generation weighted emission rates of the plants. Generation data is taken from reports to the U.S. Energy Information Administration for the most recent twelve month period that is available. This is typically through late 2002. Emission rates are taken from the EPA CEM data and are adjusted to the most recent twelve month period based on generation data by fuel. In cases where there were obvious errors in the reported emissions, values were calculated with emission rates from a previous year for the facility in question.

The displacement calculation is based on the average percentages of coal and natural gas providing the on demand power during each of the three weekly time periods as given in the Table 3 along with the percentage of total wind power generation available during each of the three time periods. This data is for the PJM area. For the PJM West group of plants the contribution is 100% coal in all time periods. This information was provided by load serving entities in the PJM area.

Table 3: Contribution of Coal and Natural Gas Fired Power Plants to Variable Demand in the PJM Area and the Percentage of Wind Power at Specific Time Periods.

Time Period	% Coal	% Natural Gas	% Wind Match
Mon-Sun 8hr /day (7x8 = 56hr)	80%	20%	35%
Sat-Sun 16hr/day (2x16 = 32 hr)	50%	50%	22%
Mon-Fri 16 hr/day (5x16 = 80 hr)	30%	70%	43%

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REGULATING
AIR EMISSIONS FROM PAINT:

A Model Rule for State & Local Air Agencies

State and Territorial Air Pollution Program Administrators (STAPPA)
Association of Local Air Pollution Control Officials (ALAPCO)

October 2000

444 North Capitol Street, NW, Suite 307, Washington, DC 20001
Phone: 202/624-7864 Fax: 202/624-7863
Web site: www.4cleanair.org E-mail: 4clnair@sso.org

A Comparison of the STAPPA/ALAPCO Model Rule and the National Rule

This matrix is designed to assist state and local air pollution control agencies that are seeking to achieve greater VOC reductions from the regulation of paints than those that will be provided by the National Rule. This matrix not only offers a line-by-line comparison of the two sets of limits, but it also offers a compilation of the research that was done in California to justify the promulgation of more stringent limits.

	National Rule VOC Limits (g/l)	STAPPA/ALAPCO Model Rule and CARB SCM VOC Limits (g/l)	Basis for Model Rule/CARB SCM VOC Limit (Considering both commercial and technological feasibility)
1. Flat Coatings[33]	250	100	This limit is feasible based upon a review of CARB survey data on market shares and product information from manufacturers. (See Staff Report for the proposed Suggested Control Measure for Architectural Coatings, prepared by the Stationary Source Division, California Air Resources Board, June 6, 2000 at chpt. 6, pp. 68-72. ("Staff Report")).
2. Non-Flat High-Gloss Coatings	380	250	This limit is recommended based on consistency with currently effective limits in California, a high complying market share, laboratory testing, and enforcement concerns because of possible re-labeling where products overlap with quick-dry enamels. (Id. at 102-5).
3. Non-Flat Coatings[34]	380	150	This limit is feasible based on a review of CARB survey data on market shares, product information from manufacturers, laboratory performance tests, and information on available resin technology. (Id. at 84-91).
4. Antenna Coatings	530	530	This limit is consistent with the EPA National Rule; it is feasible because it would essentially cap the VOC content of existing products. (Id. at 106-7).
5. Antifouling Coatings	450	400	This limit is feasible because it places a cap on the VOC content of existing products sold in California and it is generally consistent with limits in California District marine coating rules. (Id. at 109).
6. Bituminous Roof Coatings[35]	500	300[36]	This limit is feasible based on consistency with California District rules and data provided by the Roof Coating Manufacturers Association, which indicate a high complying market share. (Id. at 112-15).

7. Bituminous Roof Primer Coatings[37]		350	This limit is feasible because California District rules have regulated at this level for about ten years, leading to the existence of complying products. (Id. at 117).
8. Clear Brushing Lacquer Coatings[38]		680	This limit reflects the current VOC content for products in this category. (Id. at 119-21).
9. Faux Finishing Coatings	700	350	This limit is feasible as demonstrated by the complying water-based products that are currently on the market and consistency with the limit in the SCAQMD. (Id. at 123-4).
10. Fire-Resistive Coatings	850	350	This limit is feasible based on the technology assessment and limit in effect in the SCAQMD, the fact that no variances have been requested from this limit in the SCAQMD, and the fact that this limit reflects current technology. (Id. at 128-9).
11. Floor Coatings	400	250	This limit is feasible based on review of literature and trade journals, complying market share, and information provided by manufacturers and resin suppliers. (Id. at 132-5).
12. Flow Coatings	450	420	This limit is feasible because it essentially places a cap on the VOC content of existing products sold in California. (Id. at 138).
13. High-Temperature Coatings[39]	650/420	420	This limit is feasible based on review of complying market share, currently available coatings, the Harlan Associates study,[40] and currently effective District rules. (Id. at 140-1).
14. Industrial Maintenance Coatings[41]	See Endnote 41.	250[42]	This limit is feasible (except for certain climatic areas, when justified) based on review of complying market share, currently available coatings, the Harlan Associates study, the National Technical Systems (NTS) Study,[43] trade journals, information from coatings and resins manufacturers, and field experience by users of these coatings. (Id. at 147-55).
15. Lacquer Coatings	680	550	This limit is feasible based on information from coatings manufacturers and complying market share. (Id. at 157-8).
16. Low-Solids Coatings[44]	120	120	This limit is feasible based on complying market share, the limit in current District rules, the EPA National Rule limit, and discussions with manufacturers and other parties. Additionally, low solids stains and low solids wood preservatives should be combined into one low solids category because both subcategories have the same VOC limit, therefore, this limit would act as a cap on the current VOC content. (Id. at 160-2).

17. Multi-Color Coatings	580	250	This limit is feasible based on complying market share, discussions with manufacturers who have or soon will have complying products, limits currently in effect in California Districts, and a technology assessment performed by the SCAQMD in 1996. (Id. at 164-5).
18. Primer, Sealer, and Undercoater Coatings[45]	350/400	200	This limit is feasible based on a review of product data sheets, analysis of complying market share, information provided by manufacturers, and laboratory testing performed by Harlan Associates and the NTS study. (Id. at 169-73).
19. Quick-Dry Enamel Coatings	450	250	This limit is feasible based on a review of CARB survey data on market shares, product information from manufacturers, and laboratory performance tests conducted by Harlan Associates and the NTS study. (Id. at 176-80).
20. Quick-Dry Primer, Sealer, and Undercoater Coatings	450	200	This limit is feasible based on a review of product data sheets, analysis of complying market share, information provided by manufacturers, and laboratory performance testing by Harlan Associates and the NTS study. (Id. at 183-6).
21. Recycled Coatings		250	This limit can be met based on discussions with manufacturers, end users, and relevant state and federal agencies. (Id. at 189-90).
22. Roof Coatings	250	250	This limit is feasible based on complying market share, data provided by the Roof Coatings Manufacturer Association, and meetings with members of the industry. (Id. at 193-4).
23. Rust Preventative Coatings	400	400	This limit is feasible based on a review of complying market share and product data sheets. (Id. at 196-8).
24. Specialty Primers, Sealers, and Undercoater Coatings		350	This limit is feasible based on a review of product data sheets and information from the manufacturers, consistency with the interim limit in the SCAQMD, and the fact that this limit is consistent with the EPA National Rule limit (for primers, sealers and undercoater coatings). (Id. at 202-3).
25. Stains	550	250	This limit is feasible based on a review of the literature and trade journals, complying market share, existing regulatory limits, literature searches, and information provided by the manufacturers or resin suppliers. (Id. at 205-7).
26. Swimming Pool Coatings	600	340	This limit is feasible based on complying market share, a review of product literature on coatings included in this category, and discussions with manufacturers and retailers of these coatings. (Id. at 209-11).

27. Swimming Pool Repair and Maintenance Coatings		340	This category applies only to chlorinated rubber coatings and will be phased out of District rules. Reformulation of chlorinated rubber coatings is probably not feasible, but the Model Rule limit is attainable with currently available technology (see Swimming Pool Coatings). (Id. at 212-3).
28. Temperature-Indicator Safety Coatings[46]	650	550	This limit is feasible based on a review of currently available coatings and discussions with the industry representatives. (Id. at 214-5).
29. Traffic Marking Coatings	150	150	This limit is feasible based on technological assessments at federal, state, and district levels, discussions with end users of this type of coating, complying market share, review of product literature, and the fact that this limit is consistent with the EPA National Rule. (Id. at 217-8).
30. Waterproofing Masonry/Concrete Sealers	600	400	This limit is feasible based on a review of the literature and trade journals, complying market share, information provided by manufacturers and resin suppliers, and testing conducted by the Harlan Associates and the NTS study. (Id. at 221-3).
31. Waterproofing Sealers	600	250	This limit is feasible based on a review of the literature and trade journals, complying market share, information provided by manufacturers and resin suppliers, and testing conducted by the Harlan Associates and the NTS study. (Id. at 226-8).
32. Bond Breakers	600	350	This limit is feasible based on the high complying market share, the limit in current California District rules, and the fact that this limit has been in effect in some areas for years; also, there have been no adverse comments received concerning this limit. (Id. at 230-1).
33. Concrete Curing Compounds	350	350	This limit is feasible based on the high complying market share, the fact that it is consistent with the limit in current California District rules that have been in effect for several years, and consistency with the EPA National Rule. (Id. at 232-3).
34. Dry Fog Coatings	400	400	This limit is feasible based on the high complying market share, the limit in current California District rules that have been in effect for several years, review of product literature, the fact that no adverse comments were received, and the fact that it is consistent with the EPA National Rule. (Id. at 234-5).

35. Fire-Retardant Coatings – Clear[47]	850	650	This limit is feasible based on the high complying market share, consistency with California District limits that have been in effect for years, review of product literature, and discussions with manufacturers; also, no adverse comments were received concerning this limit. (Id. at 238-9).
36. Fire-Retardant Coatings – Opaque[48]	450	350	This limit is feasible based on the high complying market share, consistency with California District rules that have been in effect for years, a review of product literature, and discussions with manufacturers; also, no adverse comments were received about this limit. (Id. at 240-1).
37. Form Release Compounds	450	250	This limit is feasible based on the high complying market share, and consistency with California District rules that have been in effect for years; also, no adverse comments were received concerning this limit. (Id. at 242-3).
38. Graphic Arts Coatings	500	500	This limit is feasible based on the high complying market share, consistency with limits that have been in effect in California Districts for several years, and the fact that it is consistent with the EPA National Rule. (Id. at 244-5).
39. Magnesite Cement Coatings	600	450	This limit is feasible based on consistency with California District rules that have been in effect for years, discussions with a major manufacturer, and a technology assessment performed by the SCAQMD; also, no adverse comments were received concerning this limit. (Id. at 248-9).
40. Mastic Texture Coatings	300	300	This limit is feasible based on a high complying market share, comments justifying this limit based on performance requirements, consistency with the limits that have been in effect in California Districts for several years, a review of product literature, and the fact that it is consistent with the EPA National Rule. (Id. at 250-1).
41. Metallic Pigmented Coatings	500	500	This limit is feasible based on the high complying market share, consistency with limits that have been in effect in California Districts for several years, a review of product literature, the fact that no adverse comments were received, and the fact that it is consistent with the EPA National Rule. (Id. at 253-6).
42. Pre-Treatment Wash Primers	780	420	This limit is feasible based on the fact that it is consistent with California District rules that have been in effect for years. (Id. at 257-8).

43. Sanding Sealers (Non-Lacquer)	550	350	This limit is feasible based on the fact that it is consistent with California District limits that have been in effect for years and the fact that complying products were reported in the survey; also, no adverse comments were received concerning this limit. (Id. at 261-2).
44. Shellac – Clear[49]	730	730	This limit is feasible based on the high complying market share, consistency with limits in California Districts that have been in effect for several years, and the fact that it is consistent with the EPA National Rule. (Id. at 264-5).
45. Shellac – Opaque[50]	550	550	This limit is feasible based on the high complying market share, consistency with limits in California Districts that have been in effect for several years, and the fact that it is consistent with the EPA National Rule. (Id. at 268).
46. Varnishes[51]	450	350	This limit is feasible based on the high complying market share, the fact that it is consistent with California District limits that have been in effect for years, and performance testing conducted by the Harlan Associates; also, no adverse comments were received concerning this limit. (Id. at 271-3).
47. Wood Preservatives	550/550/550/350[52]	350	This limit is feasible based on the high complying market share and the fact that it is consistent with California District limits that have been in effect for years; also, no adverse comments were received concerning this limit. (Id. at 276-8).

Endnotes

[33] The National Rule divides the Flat Coatings category into Interior Flat Coatings and Exterior Flat Coatings. However, both must meet the same VOC limit.

[34] The National Rule divides the Non-Flat Coatings category into Interior Non-Flat Coatings and Exterior Non-Flat Coatings, both having the same VOC limit.

[35] The National Rule regulates Bituminous Coatings in general, while the SCM and Model Rule apply only to Bituminous Roof Coatings. For an explanation of this choice, see Chapter VI of the Staff Report.

[36] This limit was raised from the SCM draft limit of 250 g/l in order to accommodate climatic conditions.

[37] This category was added to the SCM draft to deal with climatic conditions and in order to clarify coating definitions.

[38] This coating is a clear wood finish that is intended for application by brush only. Although this type of coating is currently included in the general lacquer coatings category in the District rules, a separate category was created for the Model Rule because a higher limit was necessary for the unique application and finish characteristics of Clear Brushing Lacquers.

[39] The National Rule treats the coatings covered by this category as two separate categories. The categories in the National Rule are High-Temperature Coatings and Heat-Reactive Coatings, and the limits noted above apply respectively.

[40] Harlan Associates study shows compliant coatings have similar performance characteristics as higher-VOC coatings. This study was contracted by CARB to test compliant coatings for characteristics such as hardness, stability, durability, application, and appearance, in direct comparison to higher-VOC coatings. While different tests and results applied to the varying categories, this study indicated at least comparable performance.

[41] The National Rule contains an industrial maintenance coatings category with a VOC limit of 450 g/l. However, there are several subcategories of industrial maintenance coatings for special applications that have separate limits, as follows:

Coating Category	VOC Limit (g/l)
Anti-Graffiti	600
Chalkboard Resurfacers	450
Extreme High Durability	800
Heat Reactive	420
Impact Immersion	780
Nonferrous Ornamental Metal Lacquers and Surface Protectants	870
Nuclear	450
Repair and Maintenance Thermoplastic	650
Thermoplastic Rubber and Mastics	550

[42] The SCM allows a VOC limit of 340 g/l through a petition process for areas of California with low temperature, high humidity, and persistent fog (see Staff Report, page 47). This Model Rule includes the same option, to be included at the discretion of state and local air pollution control agencies.

[43] National Technical Systems study showed lower-VOC coatings to exhibit similar performance characteristics as higher-VOC coatings. NTS is an independent testing company that performed various tests, such as brushing properties, dry time and sag resistence, under contract by the South Coast Air Quality Management District. These tests indicated that the compliant coatings demonstrated at least comparable performance levels.

[44] The National Rule divides this coating into Low Solids Stains and Low Solids Wood Preservatives, both having the same VOC limit.

[45] The National Rule has one category for Primers and Undercoaters (the first VOC limit listed above for this category under National Rule VOC limits), and another category for Sealers (the second VOC limit listed above).

[46] Products falling into this category are not treated individually in the National Rule, but rather would be covered by the High-Temperature Coatings category.

[47] The National Rule defines this category as Fire-Retardant and Fire-Resistive Coatings. The SCM and Model Rule, however, treat Fire-Retardant and Fire-Resistive Coatings separately.

[48] See Endnote 47.

[49] Note that the National Rule definition for this category is significantly different than the definition used in the SCM and Model Rule, with potentially higher VOC emissions resulting from the National Rule definition.

[50] See Endnote 49.

[51] The Staff Report provides commercial feasibility information and justifications for both Semi-Transparent and Clear Varnishes.

[52] The National Rule divides this category into Below Ground Wood Preservatives (550 g/l), Clear Wood Preservatives (550 g/l), Semitransparent Wood Preservatives (550 g/l), and Opaque Wood Preservatives (350 g/l).