



## Exempt Action Final Regulation Agency Background Document

<b>Agency name</b>	State Air Pollution Control Board
<b>Virginia Administrative Code (VAC) citation</b>	Primary action: 9VAC5-91
<b>Regulation title</b>	Regulation for the Control of Motor Vehicle Emissions in Northern Virginia
<b>Action title</b>	Clean Screen (Rev. MN)
<b>Document preparation date</b>	December 5, 2012

When a regulatory action is exempt from executive branch review pursuant to § 2.2-4002 or § 2.2-4006 A of the Administrative Process Act (APA), the agency is encouraged to provide information to the public on the Regulatory Town Hall using this form.

Note: While posting this form on the Town Hall is optional, the agency must comply with requirements of the Virginia Register Act, the *Virginia Register Form, Style, and Procedure Manual*, and Executive Orders 14 (2010) and 58 (99).

### Summary

*Please provide a brief summary of all regulatory changes, including the rationale behind such changes. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation.*

The current inspection and maintenance (I/M) program requires that affected vehicles be presented to emissions inspection stations biennially to receive an emissions inspection. This is accomplished through a network of service stations, repair garages, and other similar facilities that perform the inspections. Vehicles which fail the test are denied motor vehicle registration until inspection has been accomplished. Retests, after failure and repair, are free if accomplished within 14 days of the test and performed by the emissions inspection station which performed the initial test. If a motorist wishes to request a waiver of the test, an expenditure of at least \$450 on emissions-related repairs is required. The cost amount is adjusted each January by applying the Consumer Price Index released the previous fall by the federal government.

The geographic coverage of the program consists of the counties of Arlington, Fairfax, Loudoun, Prince William, and Stafford; and the cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park. Cars and trucks weighing up to 10,000 pounds and are 25 years old and newer are subject to an exhaust emissions inspection using acceleration simulation mode (ASM) equipment which tests cars under "loaded" conditions using a dynamometer. On-Board Diagnostics Systems (OBD) on vehicles so equipped are also be inspected. In addition, random testing of vehicles is accomplished using either

roadside pullovers or a remote sensing device (RSD) next to the roadway. Failing vehicles are required to report to an inspection for an out-of-cycle test.

The proposed amendments are being made to conform to state law for the testing of emissions, including remote sensing, from motor vehicles located or primarily operated in Northern Virginia. Section 46.2-1176-1187.3 of the Virginia Air Pollution Control Law (Title 46.2, Chapter 10 of the Code of Virginia) authorizes the State Air Pollution Control Board to promulgate regulations for the control of motor vehicle emissions and for emissions testing including remote sensing. Specifically, the 2012 amendments to § 46.2-1178 C require the establishment by regulation of the following on-road testing requirements:

1. On and after July 1, 2012, and before July 1, 2013, an on-road clean screen program shall be limited to no more than 10 percent of the motor vehicles which are eligible for emissions inspection during the applicable 12-month period.
2. On and after July 1, 2013, and before July 1, 2014, an on-road clean screen program shall be limited to no more than 20 percent of the motor vehicles which are eligible for emissions inspection during the applicable 12-month period.
3. On and after July 1, 2014, an on-road clean screen program shall be limited to no more than 30 percent of the motor vehicles described in this subsection which are eligible for emissions inspection during the applicable 12-month period.

The department conducted a public comment period in order to solicit public input on the issue as to whether it is appropriate to include remote OBD III as a requirement or if only infrared light RSD should be required.

**Statement of final agency action**

*Please provide a statement of the final action taken by the agency, including (1) the date the action was taken, (2) the name of the agency taking the action, and (3) the title of the regulation.*

On November 30, 2012, the State Air Pollution Control Board took final action to adopt amendments to the "Regulation for the Control of Motor Vehicle Emissions in Northern Virginia," specifically, provisions addressing the clean screen program. The regulatory action is to be effective as provided in the Administrative Process Act.

**Changes made since the proposed stage**

*Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar's office, please put an asterisk next to any substantive changes.*

Section number	Requirement at proposed stage	What has changed	Rationale for change
*9VAC 5-91-185	Option A: Infrared Light RSD only <del>GA. Beginning July 1, 2005, clean</del> Clean screen vehicles will <del>shall</del> be identified by an on-road emissions	Provisions highlighted in yellow show the difference between option A, which is language addressing clean screening vehicles using	The department agrees that remote OBDIII is not an appropriate I/M requirement and the proposal has been

	<p>inspector using on-road testing <del>equipment measurements</del> based on all of the following criteria <u>until the provisions of subsection B of this section become effective according to the schedule in subsection D of 9VAC5-91-740:</u></p> <p>1. Up to 5.0% of the number of vehicles measured during any 30-day period may be identified as clean screen vehicles. This percentage may be evaluated annually by the department and adjusted based on the amount of emissions reduction lost due to clean screening.</p> <p>2. Vehicles that have the cleanest measurements based on an average of at least three measurements (taken on three different days in a 120-day time period) may be identified as clean screen vehicles as determined by the percentage of the applicable standards.</p> <p>3. Vehicles must have no measurements exceeding the <u>on-road high emitter emissions standards standard in Table III-B</u> <del>(taken on three different days in a within the 120-day time period as required in subdivision 2 of this subsection)</del> to be identified as clean screen vehicles.</p> <p>4. Vehicles must not be equipped with an OBD system unless DEQ makes a determination to include certain OBD model years based on evidence that there would not be a significant loss in emissions reduction benefits.</p> <p><u>B. Vehicles shall be identified as clean screen vehicles by an on-road emissions inspector using on-road testing based on the following criteria:</u></p> <p>1. <u>The vehicle is due for an emissions inspection test within 120 days;</u></p>	<p>infrared light only, and Option B, which includes both infrared and OBD III remote sensing for testing vehicles under the clean screen program. Option B was rejected; clean screen vehicles will be identified using infrared light remote sensing only.</p>	<p>revised accordingly.</p>
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	<p><u>2. The result of the most recent initial emissions test on record with the Department is not a "fail";</u></p> <p><u>3. No on-road emissions measurement since the most recent initial emissions test exceeds the on-road high emitter emissions standards as determined according to 9VAC5-91-180 B;</u></p> <p><u>4. The two most recent on-road emissions measurements taken within 12 months of the registration expiration date shall not exceed the clean screen standards as determined in subsection D of this section and the vehicle must have a vehicle emissions index no greater than 80; or</u></p> <p><u>5. The most recent on-road emissions measurement taken within 12 months of the registration expiration date shall not exceed the clean screen standards as determined in subsection D of this section and the vehicle shall have a vehicle emissions index no greater than 75.</u></p> <p><u>C. On an annual basis, at least 2% of the vehicles meeting the clean screen criteria in subsection B of this section shall not be notified of the clean screen and may receive an emissions test at an emission inspection station. The Department shall analyze these test results to determine the effect of on-road testing on total emissions reductions. The Director may decrease the maximum vehicle emissions index specified in subdivision B 4 and 5 of this section as necessary to ensure compliance with federal requirements in accordance with 9VAC5-740 F.</u></p> <p><u>D. The clean screen vehicle standards are determined as a percentage of the values in Table III-</u>  <u>C. The Director may adjust the</u></p>		
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	<p><u>percentage between 50% to 80% to ensure compliance with federal requirements in accordance with 9VAC5-740 F.</u></p> <p><u>E. The Director may exempt certain vehicle models with known emissions related deficiencies.</u></p> <p><del>HEF.</del> At the discretion of the director, <del>vehicles identified as clean</del> <u>Clean</u> screen vehicles <del>in accordance with subsection G of this section</del> may be recorded as having passed the next emissions inspection required by § <del>46.2-1183</del> § <u>46.2-1178.1 E</u> of the Code of Virginia and the result shall be entered into the emissions inspection record for that vehicle.</p> <hr/> <p>Option B: Infrared Light and OBDIII RSD</p> <p><del>GA. Beginning July 1, 2005,</del> <u>clean</u> <u>Clean</u> screen vehicles <del>will</del> shall be identified by an <u>on-road emissions inspector using on-road testing equipment measurements</u> based on all of the following criteria <u>until the provisions of subsection B of this section become effective according to the schedule in subsection D of 9VAC5-91-740:</u></p> <p>1. Up to 5.0% of the number of vehicles measured during any 30-day period may be identified as clean screen vehicles. This percentage may be evaluated annually by the department and adjusted based on the amount of emissions reduction lost due to clean screening.</p> <p>2. Vehicles that have the cleanest measurements based on an average of at least three measurements (taken on three different days in a 120-day time period) may be identified as clean screen vehicles as determined by the percentage of the applicable standards.</p>	<p>As discussed above, Option B has been rejected.</p>	<p>The department agrees that remote OBDIII is not an appropriate I/M requirement and the proposal has been revised accordingly.</p>
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	<p>3. Vehicles must have no measurements exceeding the <u>on-road high emitter emissions standards standard in Table III B (taken on three different days in a within the 120-day time period as required in subdivision 2 of this subsection) to be identified as clean screen vehicles.</u></p> <p>4. Vehicles must not be equipped with an OBD system unless DEQ makes a determination to include certain OBD model years based on evidence that there would not be a significant loss in emissions reduction benefits.</p> <p><u>B. Vehicles shall be identified as clean screen vehicles by an on-road emissions inspector using on-road testing based on the following criteria: in subdivisions 1 through 3 of this subsection and the criteria in either subdivision 4 or 5.</u></p> <p><u>1. The vehicle is due for an emissions inspection test within 120 days;</u></p> <p><u>2. The result of the most recent initial emissions test on record with the Department is not a "fail";</u></p> <p><u>3. No on-road emissions measurement since the most recent initial emissions test exceeds the on-road high emitter emissions standard as determined according to 9VAC5-91-180 B; and</u></p> <p><u>4. For remote sensing using infra-red, ultraviolet or other gas concentration measurement devices either of the following criteria shall be met:</u></p> <p><u>a. The two most recent on-road emissions measurements taken within 12 months of the registration expiration date shall not exceed the clean screen standards as determined in subsection D of this section and the</u></p>		
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	<p>vehicle must have a <u>vehicle emission index no greater than 80;</u> <u>or</u></p> <p><b>b.</b> <u>The most recent emissions measurement taken within 12 months of the registration expiration date shall not exceed the clean screen standards as determined in subsection D of this section and the vehicle shall have a vehicle emissions index no greater than 75.</u></p> <p><b>5.</b> <u>For remote sensing using on-road wireless communication with the vehicle's on-board diagnostic (OBD) system, the following criteria shall be met:</u></p> <p><b>a.</b> <u>The OBD system shall indicate no pending or current diagnostic trouble codes.</u></p> <p><b>b.</b> <u>The OBD system shall indicate that all applicable monitors are supported and ready; and</u></p> <p><b>c.</b> <u>The vehicle identification number encoded by the OBD system shall correspond to the vehicle identification number on the vehicle registration record.</u></p> <p><b>C.</b> <u>On an annual basis, at least 2% of the vehicles meeting the clean screen criteria in subsection B of this section shall not be notified of the clean screen and may receive an emissions test at an emission inspection station. The Department shall analyze these test results to determine the effect of on-road testing on total emissions reductions. The Director may decrease the maximum vehicle emissions index specified in subdivision B4, of this section as necessary to ensure compliance with federal requirements in accordance with 9VAC5-740 F.</u></p> <p><b>D.</b> <u>The clean screen vehicle</u></p>		
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	<p>standards are determined as a percentage of the values in Table III-C. The Director may adjust the percentage range between 50% to 80% to ensure compliance with federal requirements in accordance with 9VAC5-740 F.</p> <p><b>E. The Director may exempt certain vehicle models with known emissions related deficiencies.</b></p> <p><b>HEF.</b> At the discretion of the director, vehicles identified as clean Clean screen vehicles in accordance with subsection G of this section may be recorded as having passed the next emissions inspection required by <del>§ 46.2-1183</del> § 46.2-1178.1 E of the Code of Virginia and the result shall be entered into the emissions inspection record for that vehicle.</p>		
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**Public comment**

*Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.*

<b>Commenter</b>	<b>Comment</b>	<b>Agency response</b>
<p>Honorable John C. Watkins</p>	<p>As the Senate patron of the 2012 clean screen legislation, I am writing to oppose the inclusion of remote OBD III in DEQ's clean screen program. I support DEQ's original recommendation, Option A, and I encourage the members of the Air Board to follow that recommendation.</p> <p>Remote OBD III has never been used as part of a public clean screen program in any state, due in part to the numerous privacy concerns related to such tracking technology. The "Big Brother" aspects of remote sensing were a significant concern for many legislators during the 2012 session, and numerous hours were spent crafting language that would ensure minimal privacy implications for Virginia's driving public.</p> <p>The Administration shared these same privacy concerns. In fact, at the signing ceremony for the legislation in June of this year, Governor McDonnell asked if the legislation would have "Big Brother" implications. Del. Joe May and I assured the Governor that the legislation was purposely limited to technology that is capable of measuring vehicle</p>	<p>The department agrees that remote OBDIII is not an appropriate I/M requirement and the proposal has been revised accordingly.</p>

	<p>emissions and that it did not allow the use of tracking technology.</p> <p>Thank you for your consideration of this matter, and I ask the Air Board members to support DEQ's original recommendation.</p>	
<p>Honorable Delegate Joe T. May</p>	<p>As the patron of HB 805 (2012), I am writing to oppose the inclusion of remote OBDIII as a clean screen program technology. I support Option A of the draft regulations. For the reasons set forth below, remote OBDIII was not intended by me or any other legislator to be a component of the clean screen program. I feel that, given the language of the legislation, inclusion of this technology would be inappropriate.</p> <p>While remote sensing using optical absorption technology has had more than 20 years of field testing and has been used in numerous states, including Virginia, to conduct on-road emissions testing, to my knowledge OBDII has never been used as a clean screen technology in any state.</p> <p>I must point out that the Big Brother aspects of remote sensing remains a major concern of many legislators. For this reason, I intentionally limited my bill to technology which measures emission directly by use of optical transmission methods. I <u>intentionally did not</u> include technology such as OBDII which could also provide vehicle movement and location data in addition to emission data.</p> <p>While OBDII in an innovative technology when used appropriately, it is not consistent with the original intent of my bill. I encourage the members of the Air Board to support DEQ's original recommendation, Option A, and I thank them for their consideration of this letter.</p>	<p>The department agrees that remote OBDIII is not an appropriate I/M requirement and the proposal has been revised accordingly.</p>
<p>Anna Schneider Vice President, Industry- Government Relations, Volkswagen Group of America</p>	<p>I am writing on behalf of the Volkswagen Group of America ("Volkswagen Group") to respectfully request that the Air Pollution Control Board <u>not</u> consider inclusion of remote OBDIII technology in Virginia's clean screen emissions inspection program. While Volkswagen Group is a leader in the production of low emission, fuel efficient vehicles, too many questions remain unanswered about the technology, and until these issues are clarified, the Volkswagen Group must oppose its use in Virginia's clean screen emissions inspection program.</p> <p>The Volkswagen Group is one of the world's leading automobile manufacturers and the largest carmaker in Europe. The Volkswagen Group is headquartered in Herndon, Virginia and has approximately 4,500 employees in the United States, including over 400 employees in Virginia.</p> <p>The Volkswagen Group is unaware of any state in which</p>	<p>The department agrees that remote OBDIII is not an appropriate I/M requirement and the proposal has been revised accordingly.</p>

	<p>remote OBDIII technology has been utilized as acceptable technology for a state's clean screen program, and we are concerned that not all of the potential impacts of remote OBDIII technology have been considered.</p> <p>For example, will the installation of the transmitter be the responsibility of the auto manufacturer or a third party? If installation of the transmitter is the responsibility of a third party, will the third party be liable to the auto manufacturer for any vehicle warranty issues that are triggered as a result of faulty installation? Will DEQ oversee the warranty reimbursement program and handle consumer complaints related to faulty installation or malfunctioning transmitters?</p> <p>Additionally, the Volkswagen Group is concerned with the privacy issues that are related to remote OBDIII technology. How will the data be encrypted and safeguarded? Who will be responsible for setting privacy standards? Are the transmitters tamper proof?</p> <p>These are just a few of the many important questions that exist, and it is critical that these issues are considered before we include this technology in Virginia's clean screen program.</p>	
<p>Lothar Geilen, President and CEO Systech International</p>	<p>Systech International, LLC (Systech) is pleased to provide this response to the “General Notice–Public Comment Opportunity – Proposed Amendments to Northern Virginia Vehicle Emissions Inspection and Maintenance Program” dated September 21, 2012. Systech was honored to be asked to participate on the Regulatory Advisory Panel convened by the Virginia Department of Environmental Quality. Our Executive Director of Business Development, Mr. Bill Dell, has attended and participated in every meeting of the panel. His background is relevant to the issues under consideration by the Air Pollution Control Board as he was the founding president of Remote Sensing Technologies, Inc., the company that developed and commercialized the “light-sensing equipment” discussed in the proposed modifications to the regulations. Very few people possess Mr. Dell’s history with and knowledge of the remote measurement of automotive exhaust.</p> <p>We strongly encourage the Air Pollution Control Board to adopt “Option B: Infrared Light and OBD III RSD” under the proposed rule, “9VAC5-91-185 Clean screen vehicle emissions standards for on-road testing.” Should the board decide to adopt the alternative Option A, it would limit the flexibility that the Commonwealth can have to receive proposals representing competitive technological options for the Clean Screen program. Therefore, Option A is contrary to the statutory requirement in § 46.2-1182.2, that “the Department of Environmental Quality shall make</p>	<p>The department believes that too many unresolved issues are associated with remote OBD language to be included in the final regulation and the proposal has been revised accordingly.</p>

	<p>its best efforts to obtain proposals from multiple vendors to operate the on-road clean screen program.”</p> <p>At issue is: what remote sensing technologies can be used under the proposed rules to implement the on-road clean screening program? At this time there are two known technologies that could potentially meet the statutory definition:</p> <p>1) A light sensing technology that transmits a light beam across a roadway at the approximate height of vehicle tailpipes and estimates vehicle emissions based on the relative concentrations of specific gasses compared with ambient air as vehicles pass through the light beam.</p> <p>2) An electronic technology that connects a radio transmitter to the vehicle computer system and transmits emission data from the vehicle as it travels on the roadway – similar to OnStar® by General Motors. On 1996 and newer vehicles the electronic connection is standardized and is known as On Board Diagnostics 2 (OBD2).</p> <p>Both technologies capture vehicle specific emissions information from a “remote location such as the roadside.” Therefore both technologies meet the statutory definition of “remote sensing” in §46.2-1176.</p> <p>Option B in the proposed rule correctly recognizes that there are multiple technologies that can be used to fulfill the statutory requirements for the establishment of a Clean Screen Program, namely remote light-sensing and wireless Remote OBD (referred to as OBD3 in the proposed rule). Rather than have the government designate a particular technology, Option B will engage the competitive marketplace to help the Commonwealth select the best Clean Screen Program approach for providing consumer choice at the lowest cost.</p> <p>Advocates for the company providing the “light-sensing equipment” in the current Virginia pilot program (“RSD Company”) will argue that the word “measurement” in the statute § 46.2-1176 requires that the Commonwealth only use their technology because only theirs “measures” emissions from vehicle tailpipes. The statute reads as follows: “Remote sensing” means the measurement of motor vehicle emissions through electronic or light-sensing equipment from a remote location such as the roadside. Remote sensing equipment may include devices to detect and record the vehicle’s registration or other identification numbers. (§ 46.2-1176, emphasis added.)</p> <p>Their argument is misleading, untrue and self-serving. The statute clearly contemplates multiple technologies when it says, “through electronic or light-sensing equipment,” where “or” is the operative word. Remote testing through</p>	
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	<p>light-sensing is one method. Another is electronic measurement of the vehicle On-Board Diagnostic (OBD) system and remotely transmitting results using wireless technology. Furthermore, the vehicle's OBD system does, in fact, measure emissions via oxygen sensors, and it additionally monitors an array of on-board sensors. The combined results of these emissions measurements and sensor monitors are used to determine whether the vehicle is polluting.</p> <p>As published in the Federal Register, the RSD Company made a similar argument to the US EPA regarding the word "measure" as it relates to OBD:  EPA cannot allow states to suspend tailpipe testing in favor of OBD-I/M checks because the OBD system does not measure emissions, but merely infers the potential for increased emissions by monitoring individual components and systems. (Federal Register, Vol. 66, No. 66, Thursday, April 5, 2001: Rules and Regulations, page 18165) The US EPA debunked and rejected that argument as follows:</p> <p>EPA believes that it has demonstrated that the OBD-I/M check is at least equivalent to the currently available I/M tailpipe and evaporative fill-neck and purge tests in terms of reducing emissions and identifying vehicles in need of repair. (Federal Register, Vol. 66, No. 66, Thursday, April 5, 2001: Rules and Regulations, page 18166)</p> <p>Contrary to their own argument, as recorded in the same volume of the Federal Register, the RSD Company also suggested itself that OBD tests can be used to clean screen vehicles:</p> <p>Under the [RSD Company] proposal, EPA would allow states to phase-in implementation of OBD-I/M inspection beginning January 1, 2002. Phase-in of the requirement would be achieved by performing the OBD-I/M inspection on MY 1996 and newer, OBD-equipped vehicles as a method for screening out clean vehicles from additional testing. Under this scenario, if an OBD equipped vehicle passed the OBD-I/M inspection it would complete the inspection process and be considered in compliance with the state's I/M requirements. (Federal Register, Vol. 66, No. 66, Thursday, April 5, 2001: Rules and Regulations, pages 18158-18159, emphasis added)</p> <p>There are multiple methods for measuring vehicle emissions which are recognized by the US EPA in federal rules that characterize and enforce the vehicle emission inspection program in Virginia. These methods include directly measuring tailpipe emissions at the source, and checking the OBD system on vehicles of 1996 model year and newer. As stated on their website, the US EPA does not recognize remote light-sensing as a viable method of</p>	
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	<p>conducting official vehicle emission inspections:</p> <p><i>Remote sensing devices placed on the side of roads can identify some polluters, but are no substitute for I/M. Cars passing by are checked for pollution from the exhaust system as the vehicle moves down the road. The accuracy of these checks is limited. They won't evaluate every vehicle and they won't catch such serious problems as emission leaks under the hood, where a great deal of pollution occurs.<sup>1</sup></i></p> <p>The laws of physics prevent remote light-sensing technology from ever being accurate enough to withstand legal challenges if it is used as a standard to trigger fines or registration denial. Furthermore, using it in Virginia's I/M program, as Option A of the proposed rules requires, will cause a reduction in the air quality benefit derived from the program. The proposed rules attempt to overcome this shortcoming by authorizing DEQ to identify "dirty screened" vehicles and requiring owners of those vehicles to have their vehicle inspected again by an EPA approved technology and repaired at a regular inspection station if it turns out that their vehicle truly does pollute. These "off cycle" inspections and repairs will generate additional air quality benefit according to US EPA rules, which will offset the benefits lost by motorists purchasing "clean screens." The statute requires that there be no net loss of benefit. Therefore, while many people will be inconvenienced by being caught in "dirty screens," just as many will benefit from being able to purchase clean screens. For this reason, it is crucially important that the motoring public be provided with a more accurate, EPA approved on-road testing alternative.</p> <p>The electronic technology (i.e., Remote OBD), on the other hand, is a US EPA approved method of conducting official emission inspections. In fact, the OBD test is used by the Commonwealth of Virginia as an official test.<sup>2</sup> Because its accuracy in the on-road environment is every bit as good as its accuracy in the inspection station environment, Remote OBD technology is recommended by the US EPA for remote road-side testing as is required by Virginia statute. This fact is fully documented in the US EPA report, "Recommended Guidance for Remote OBD I/M Programs," September 2010.<sup>3</sup> Therefore, using the Remote OBD electronic technology for the clean screen program to answer the Virginia statutory requirement will not result in any loss of air quality benefit. And, if it is used for "dirty screen" as well, additional benefit will accrue to the program, which could become valuable to DEQ if/when federal air quality standards are tightened as expected in the next few years. Furthermore, it can be used for "dirty screen" with absolute confidence that motorists are not being unfairly inconvenienced by false readings.</p>	
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	<p>Performing Virginia’s official OBD test remotely, using wireless technology, will satisfy the Clean Screen statute while at the same time performing an official Virginia emission test. So we once again encourage the State Air Pollution Control Board to adopt Option B as proposed in the draft rule to preserve the flexibility for the Commonwealth to evaluate multiple technologies when designing its new Clean Screen program.</p> <p><sup>1</sup> See: <a href="http://www.epa.gov/otaq/cfa-air.htm">http://www.epa.gov/otaq/cfa-air.htm</a></p>	
<p>Alexander M. Macaulay, Macaulay &amp; Burtch, P.C.</p>	<p>I am writing on behalf of Envirotest Systems Holding Corp. (“Envirotest”) in support of the draft regulations (Option A) recommended by the Department of Environmental Quality (“DEQ”). Envirotest opposes the inclusion of remote OBD equipment (“Remote OBD”) in Virginia’s clean screen emissions inspection program. Because Remote OBD cannot measure exhaust pollutants as required by statute, its inclusion in the clean screen program conflicts with applicable law.</p> <p>Neither the Environmental Protection Agency (“USEPA”) nor any state recognizes Remote OBD as a component of a clean screen or on-road testing program. And significant unknowns surround Remote OBD because it has never been discussed or vetted in any legislative or stakeholder meeting.</p> <p><b><u>Measurement Required</u></b></p> <p>The enabling legislation requires that any equipment used in a remote sensing clean screen program be capable of measuring vehicle emissions. The statute, Virginia Code § 46.2-1176, states:</p> <p>"Remote sensing" means the <i>measurement</i> of motor vehicle emissions through electronic or light-sensing equipment from a remote location such as the roadside. Remote sensing equipment may include devices to detect and record the vehicle's registration or other identification numbers (emphasis added).</p> <p>While infrared light remote sensing equipment actually measures emissions, Remote OBD merely receives and transmits trouble code information via wireless technology. Remote OBD cannot provide any quantifiable values – it can only track whether a vehicle’s emission control systems are malfunctioning or operating normally. In other words, Remote OBD cannot measure.</p> <p><b><u>Plain Meaning</u></b></p> <p>Some stakeholders have argued that the receipt and continuous transmittal of emission information can be interpreted to mean the measurement of vehicle</p>	<p>The department agrees that remote OBDIII is not an appropriate I/M requirement and the proposal has been revised accordingly.</p>

	<p>emissions. But this re-definition of the word “measurement” is precisely the kind of word twisting that the Supreme Court has said numerous times is prohibited by the Plain Meaning Rule. “[W]hen we interpret unambiguous statutes . . . , we apply the plain meaning rule.” <i>City of Winchester v. American Woodmark Corp.</i>, 250 Va. 451 (1995).</p> <p>The word “measurement” is precise and unambiguous. Accordingly, DEQ Staff declined to contort the plain meaning of the word to include the transmission of data. Staff correctly recognized that “measurement” requires the act of measuring using an identifiable standard, dimension, or quantity. “Measurement” is defined as “1 : the act or process of measuring 2 : A figure, extent, or amount obtained by measuring.” Webster’s Ninth New Collegiate Dictionary.</p> <p>And nowhere in any definition of “measure” is there an indication that “transmission of data” could be considered an act of measuring. For example, the World English Dictionary defines measure as: 1. a unit or standard of measurement: weights and measures. 2. a system of measurement: liquid measure. 3. an instrument, as a graduated rod or a container of standard capacity, for measuring. 4. the extent, dimensions, quantity, etc., of something, ascertained especially by comparison with a standard: to take the measure of a thing. 5. the act or process of ascertaining the extent, dimensions, or quantity of something; measurement. 6.a definite or known quantity measured out: to drink a measure of wine. 7. any standard of comparison, estimation, or judgment. 8. a quantity, degree, or proportion: in large measure. 9. a moderate amount: to live with a measure of enjoyment. 10. a limit, or an extent or degree not to be exceeded: to know no measure. 11. reasonable bounds or limits: to know no measure. 12. a legislative bill or enactment: The senate passed the new measure. 13. Usually, measures. actions or procedures intended as a means to an end: to take measures to avert suspicion. 14. a short rhythmical movement or arrangement, as in poetry or music. Compare meter<sup>2</sup> def. 1b . 15. a particular kind of such arrangement. 16. a metrical unit. 17. Music . a. the music contained between two bar lines; bar. b. an air or melody. c. a slow, dignified dance. 18. Printing . the width, measured in ems or picas, to which a column or page of printed matter is set. 19. measures, Geology . beds; strata.20. Mathematics . an abstraction of the property of length; a set function assigning to each set of a collection of sets a value, usually having the properties of sigma finiteness and finite additivity, the functional value of the whole collection being greater than zero.</p> <p>The plain meaning of Virginia’s remote sensing law requires the measurement of emissions. Because it is</p>	
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	<p>essentially a communication system, Remote OBD is unable to measure pollutant levels and can only transmit information as to whether a malfunction is occurring.</p> <p><b><u>Remote OBD: Not approved by USEPA or any State for use in a Clean Screen or On-Road Emission Testing Program</u></b></p> <p>Neither the USEPA -- nor any state with a clean screen or on-road emission testing program -- recognizes Remote OBD as a component of a remote sensing clean screen or on-road emission testing program.</p> <p>While USEPA supports the use of Remote OBD technology for compliance purposes, USEPA's draft guidance on the use of clean screening in inspection and maintenance (I/M) programs does not include Remote OBD as a component of a clean screen program. The USEPA's draft guidance regarding the use of Remote OBD in no way indicates that Remote OBD should be included as part of a clean screen program.</p> <p>Additionally, there is no precedent for the inclusion of Remote OBD in any of the ten states, including Virginia, that currently use some form of on-road emission testing. In fact, § 46.2-1176 of the statute limits the use of OBD equipment with wireless capability to a <u>station based</u>, rather than on-road, I/M program:</p> <p>"Enhanced emissions inspection program" means a motor vehicle emissions inspection system established by regulations of the Board that shall designate, <i>as the only authorized testing equipment for emissions inspection stations</i>, (i) the use of the ASM 50-15 (acceleration simulation mode or method) <i>together with an OBD-II (on-board diagnostic system) with wireless capability</i>, (ii) the use of the ASM 50-15 together with the use of a dynamometer, and (iii) two-speed tailpipe testing equipment. Possession and availability of a dynamometer shall be required for enhanced emissions inspection stations. Only those computer software programs and emissions testing procedures necessary to comply with applicable provisions of Title I of the federal Clean Air Act shall be included. Such testing equipment shall be approvable for motor vehicle manufacturers' warranty repairs. <i>An enhanced emissions inspection program shall include remote sensing and an on-road clean screen program as provided in this article.</i>" (Emphasis added)</p> <p>If Remote OBD is included in the regulations defining Virginia's clean screen program, Virginia will be the first and only state to implement a public on-road emissions program utilizing Remote OBD.</p> <p><b><u>Remote OBD: No Notice to Public; No Vetting</u></b></p>	
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	<p>Further, because Remote OBD was neither vetted as a remote sensing clean screen technology during any of the DEQ, Joint Commission on Technology and Science (JCOTS), or General Assembly committee meetings convened to discuss the clean screen program, there has been no opportunity for the public, legislators, or other interested stakeholders to engage and consider all the impacts of Remote OBD on vehicle manufacturers and the motoring public.</p> <p>For instance, who will certify or authorize the installation of Remote OBD transmitters? What protections will consumers have against the installer or the manufacturers if the transmitter is installed improperly? Will the vehicle manufacturer or the installer be liable for any issues that arise, or will it be the consumer's burden? How will data be encrypted and safeguarded? Will the data be admissible or discoverable in criminal and civil cases?</p> <p>Although the proponents of Remote OBD attended many of the relevant JCOTS and DEQ meetings, they never publicly advocated for its inclusion in the clean screen program. And they were similarly silent during at least eight different Senate and House committee meetings -- even when the legislative patrons told their colleagues that the clean screen program would use infrared light technology and not use any tracking technology.</p> <p><b><u>Violation of Privacy Concerns</u></b></p> <p>During the various meetings with both the legislators and the McDonnell Administration related to the clean screen program, assurances were given that the remote sensing equipment would collect only a minimal amount of information (license plate) and that all data could be immediately destroyed if a vehicle did not fit the qualified vehicle criteria. While legislative history is used sparingly in Virginia, the use of Remote OBD would be a breach of faith with legislators who made it very clear throughout the legislative process that they would not support a program whereby transmitters are placed in citizen's cars to continuously send data to government contractors.</p>	
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Enter any other statement here

**All changes made in this regulatory action**

*Please detail all changes that are being proposed and the consequences of the proposed changes. Detail new provisions and/or all changes to existing sections.*

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
9VAC5-91-20		<p>"Acceleration Simulation Mode (ASM) test " means a dynamometer-based emissions test performed in one or more, discreet, simulated road speed and engine load modes, and equipment which can be used to perform any such test.</p>	<p>"Acceleration Simulation Mode (ASM) test <u>50-15 equipment</u>" means a dynamometer-based emissions test <u>equipment used to performed perform an enhanced emissions test</u> in one or more, discreet, simulated road speed and engine load modes, and equipment which can be used to perform any such test.</p> <p>Change is necessary to clarify the equipment used in the enhanced emissions test.</p>
			<p><u>"Acceleration Simulation Mode (ASM) 25-25 standards"</u> means the standards utilized for one of the <u>discreet modes of the ASM test of the enhanced emissions inspection program.</u></p> <p>Definition necessary to clarify standards form equipment.</p>
9VAC5-91-20		<p>"Affected motor vehicle" means any motor vehicle or replica vehicle which:</p> <ol style="list-style-type: none"> <li>1. Was manufactured or designated by the manufacturer as a model year less than twenty-five calendar years prior to January 1 of the present calendar year according to the formula, the current calendar year minus 24, except those identified by remote sensing as specified in subdivision 5 of this definition;</li> <li>2. Is designed for the transportation of persons or property;</li> <li>3. Is powered by an internal combustion engine;</li> <li>4. For the Northern Virginia Emissions Inspection Program, has an actual gross weight of 10,000 pounds or less; and</li> <li>5. For vehicles subject to the remote sensing requirements of 9VAC5-91-</li> </ol>	<p>"Affected motor vehicle" means any motor vehicle or replica vehicle which:</p> <ol style="list-style-type: none"> <li>1. Was manufactured or designated by the manufacturer as a model year less than twenty-five calendar years prior to January 1 of the present calendar year according to the formula, the current calendar year minus 24, except those identified by remote sensing as specified in subdivision 5 of this definition;</li> <li>2. Is designed for the transportation of persons or property;</li> <li>3. Is powered by an internal combustion engine;</li> <li>4. For the Northern Virginia Emissions Inspection Program, has an actual gross weight of 10,000 pounds or less; and</li> <li>5. For vehicles subject to the remote sensing requirements of 9VAC5-91-</li> </ol>

		<p>180, was designated by the manufacturer as model year 1968 or newer.</p> <p>The term "affected motor vehicle" does not mean any:</p> <ol style="list-style-type: none"> <li>1. Vehicle powered by a clean special fuel as defined in §46.2-749.3 of the Code of Virginia, provided the federal Clean Air Act permits such exemptions for vehicles powered by clean special fuels;</li> <li>2. Motorcycle;</li> <li>3. Vehicle that, at the time of its manufacture, was not designed to meet emissions standards set or approved by the federal government;</li> <li>4. Any antique motor vehicle as defined in § 46.2-100 of the Code of Virginia and licensed pursuant to § 46.2-730 of the Code of Virginia;</li> <li>5. Fire fighting equipment, rescue vehicle, or ambulance;</li> <li>6. Vehicle for which no testing standards have been adopted by the board; or</li> <li>7. Tactical military vehicle; or</li> <li>8. Qualified hybrid motor vehicle if such vehicle obtains a rating from the U.S. Environmental Protection Agency of at least 50 miles per gallon during city fuel economy tests unless identified by the remote sensing requirements of 9VAC5-91-180 as violating the emissions standards for on-road testing.</li> </ol>	<p>180, was designated by the manufacturer as model year 1968 or newer.</p> <p>The term "affected motor vehicle" does not mean any:</p> <ol style="list-style-type: none"> <li>1. Vehicle powered by a clean special fuel as defined in §46.2-749.3 of the Code of Virginia, provided the federal Clean Air Act permits such exemptions for vehicles powered by clean special fuels;</li> <li>2. Motorcycle;</li> <li>3. Vehicle that, at the time of its manufacture, was not designed to meet emissions standards set or approved by the federal government;</li> <li>4. Any antique motor vehicle as defined in § 46.2-100 of the Code of Virginia and licensed pursuant to § 46.2-730 of the Code of Virginia;</li> <li>5. Fire fighting equipment, rescue vehicle, or ambulance;</li> <li>6. Vehicle for which no testing standards have been adopted by the board; or</li> <li>7. Tactical military vehicle; or</li> <li>8. Qualified hybrid motor vehicle if such vehicle obtains a rating from the U.S. Environmental Protection Agency of at least 50 miles per gallon during city fuel economy tests unless identified by the remote sensing requirements of 9VAC5-91-180 as violating the <u>on-road high emitter</u> emissions standards for on-road testing.</li> </ol> <p>Modification necessary for clarity.</p>
<p>9VAC5-91-20</p>			<p><u>"Basic test and repair program" means a motor vehicle emissions inspection system established by this chapter which designates the use of an OBD-II (on-board diagnostic system) with wireless capability, and a two-speed idle analyzer as the only authorized testing equipment. Only</u></p>

			<p><u>those computer software programs and emissions testing procedures necessary to comply with the applicable provisions of Title I of the federal Clean Air Act shall be included. Such testing equipment shall be approvable for motor vehicle manufacturers' warranty repairs.</u></p> <p>Definition added to clarify difference between a basic an enhanced program.</p>
9VAC5-91-20			<p><u>"Clean screen vehicle" means a vehicle that has been identified by the on-road inspector as having met the criteria in 9VAC5-91-185 A or B and is eligible to participate in the on-road clean screen program.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20			<p><u>"Clean screen vehicle notification" means (i) a document, device, or symbol, whether recorded in written or electronic form, as prescribed by the director and issued pursuant to this chapter, (ii) which indicates that an affected motor vehicle has satisfactorily complied with the clean screen vehicle emissions standards for on-road testing, and (iii) may be used by the motor vehicle owner to voluntarily comply with the vehicle registration requirements of § 46.2-1183 of the Code of Virginia. The notification shall also indicate that the motor vehicle owner may obtain an emissions inspection from an emissions inspection station.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20			<p><u>"Clean screen vehicle standard" means any provision of 9VAC5-91-185 which prescribes an emission limitation, or other criteria used to select clean screen vehicles.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20		"Confirmation test" means an emissions inspection required due to a determination that the vehicle exceeds the exhaust emissions standards prescribed in Table III-B in	<p>"Confirmation test" means an emissions inspection required due to a determination that the vehicle exceeds the exhaust <u>on-road high emitter</u> emissions standards</p>

		9VAC5-91-180 B for on-road testing through remote sensing. The confirmation emissions inspection procedure may include an exhaust test (ASM or TSI), OBD system test or both.	prescribed in Table III-B in 9VAC5-91-180 B for on-road testing through remote sensing. The confirmation emissions inspection procedure may include an exhaust test (ASM or TSI), OBD system test or both.  Modification of definition necessary to implement the clean screen program.
9VAC5-91-20		"Emissions inspector" means a person licensed by the department to perform inspections of vehicles required under the Virginia Motor Vehicle Emissions Control Law and is qualified in accordance with this chapter.	"Emissions inspector" means, <u>except for an on-road emissions inspector</u> , a person licensed by the department to perform inspections of vehicles required under the Virginia Motor Vehicle Emissions Control Law and is qualified in accordance with this chapter.  Modification of definition necessary to implement the clean screen program.
9VAC5-91-20		"Enhanced emissions inspection program" means a motor vehicle emissions inspection including procedures, emissions standards, and equipment required by 40 CFR Part 51, Subpart S or equivalent and consistent with applicable requirements of the federal Clean Air Act. The director will administer the enhanced emissions inspection program. Under the Virginia Motor Vehicle Emissions Control Law, the program requires that affected motor vehicles, unless otherwise exempted, receive biennial inspections at official emissions inspection stations, which may be test and repair facilities, in accordance with this chapter. Nothing in this program shall bar enhanced emissions inspection stations or facilities from also performing vehicle repairs.	<u>"Enhanced emissions inspection program" means a motor vehicle emissions inspection system established by this chapter that designates, as the only authorized testing equipment for emissions inspection stations, (i) the use of the ASM 50-15 (acceleration simulation mode or method) together with an OBD-II (on-board diagnostic system) with wireless capability, (ii) the use of the ASM 50-15 together with the use of a dynamometer, and (iii) two-speed tailpipe testing equipment. Possession and availability of a dynamometer shall be required for enhanced emissions inspection stations. Only those computer software programs and emissions testing procedures necessary to comply with applicable provisions of Title I of the federal Clean Air Act shall be included. Such testing equipment shall be approvable for motor vehicle manufacturers' warranty repairs. An enhanced emissions inspection program shall include remote sensing and an on-road clean screen program as provided in this chapter.</u>  Modification of definition necessary to conform to enabling legislation.
9VAC5-91-20		"High emitter index" means the method of categorizing the probable emissions inspection failure-rates of	<del>"High emitter index" means the method of categorizing the probable emissions inspection failure-rates of</del>

		<p>engine families. Values within the index are determined by computing the percentile of the historical emissions inspection failure-rate of a specific engine family, i.e., a specific group of vehicles with the same vehicle type, year, make and engine size, to the historical emissions inspection failure-rate of all engine families in a specific model year group. Failure rates are based on the most recent full year two calendar years of emissions inspection test data from the Virginia Motor Vehicle Emissions Control Program. Vehicles with an index value above 75 are considered "high-emitters."</p>	<p><del>engine families. Values within the index are determined by computing the percentile of the historical emissions inspection failure-rate of a specific engine family, i.e., a specific group of vehicles with the same vehicle type, year, make and engine size, to the historical emissions inspection failure-rate of all engine families in a specific model year group. Failure rates are based on the most recent full year two calendar years of emissions inspection test data from the Virginia Motor Vehicle Emissions Control Program. Vehicles with an index value above 75 are considered "high-emitters."</del></p> <p>Definition deleted and replaced with the term "vehicle emissions index" to provide clarity for the clean screen program.</p>
9VAC5-91-20			<p><u>"High emitter value" means the values in Table III-B of 9VAC5-91-180 that are used to determine vehicles in violation of the on-road high emitter emissions standard.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20		<p>"Inspection area" means the area that is occupied by the certified analyzer system and the vehicle being inspected</p>	<p><u>"Inspection area" means in reference to an emissions inspection station, (i) the area that is occupied by the certified analyzer system and the vehicle being inspected or, (ii) for only an OBD II test, the area within wireless range that is on the property on which the inspection station is located.</u></p> <p>Modification of definition necessary to implement the clean screen program.</p>
9VAC5-91-20		<p>"Inspection fee" means the amount of money that the emissions inspection station may collect from the motor vehicle owner for each chargeable inspection</p>	<p><u>"Inspection fee" means the amount of money that (i) the emissions inspection station may collect from the motor vehicle owner for each chargeable inspection or (ii) an on-road emissions inspector may collect from the motor vehicle owner in response to a clean screen vehicle notification.</u></p> <p>Modification of definition necessary to implement the clean screen program</p>
9VAC5-			<p><u>"Motor vehicle emissions" means any</u></p>

91-20			<p><u>emissions related information which can be captured through (i) a basic test and repair inspection, (ii) enhanced emissions inspection, or (iii) on-road testing.</u></p> <p>Definition added to provide clarity for the clean screen program.</p>
9VAC5-91-20		<p>"On-board diagnostic system (OBD system)" means the computerized emissions control diagnostic system installed on model year 1996 and newer affected motor vehicles.</p>	<p>"On-board diagnostic system (OBD <u>II</u> system)" means the computerized emissions control diagnostic system installed on model year 1996 and newer affected motor vehicles.</p> <p>Modification added to provide clarity for the clean screen program.</p>
9VAC5-91-20		<p>"On-board diagnostic system test (OBD system test)" means an evaluation of the OBD system pursuant to 40 CFR 86.094-17 according to procedures specified in 40 CFR 85.2222 and this chapter.</p>	<p>"On-board diagnostic system test (OBD <u>II</u> system test)" means an evaluation of the OBD system <del>pursuant to 40 CFR 86.094-17</del> according to procedures specified in 40 CFR 85.2222 and this chapter.</p> <p>Modification added to provide clarity for the clean screen program.</p>
9VAC5-91-20		<p>"On-board diagnostic vehicle (OBD vehicle)" means a model year 1996 and newer model affected motor vehicle equipped with an on-board diagnostic system and meeting the requirements of 40 CFR 85.2231.</p>	<p>"On-board diagnostic vehicle (OBD <u>II</u> vehicle)" means a model year 1996 and newer model affected motor vehicle equipped with an on-board diagnostic system and meeting the requirements of 40 CFR 85.2231.</p> <p>Modification added to provide clarity for the clean screen program.</p>
9VAC5-91-20			<p><u>"On-road clean screen program" means a program that allows a motor vehicle owner to voluntarily certify compliance with emissions standards by means of on-road remote sensing.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20			<p><u>"On-road emissions inspector" means the entity or entities authorized by the Department of Environmental Quality to perform on-road testing, including on-road testing in accordance with the on-road clean screen program.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20			<p><u>"On-road emissions measurement" means data obtained through on-road testing.</u></p>

			<p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20			<p><u>"On-road high emitter emissions standard" means any provision of 9VAC5-91-180 which prescribes an emission limitation, or other emission control requirements for motor vehicle emissions. The on-road high emitter emissions standard shall be determined by multiplying the high emitter value in Table III-B of 9VAC5-91-180 with the appropriate ASM 25-25 standard in 9VAC5-91-810 or the TSI standard in Table III-A of 9VAC5-91-160.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20		<p>"Remote sensing" means the observation, measurement, and recordation of motor vehicle exhaust emissions from motor vehicles while traveling on roadways or in specified areas by specialized equipment. Such equipment may use light sensing and electronic stimuli in conjunction with devices, including videographic and digitized images, to detect and record vehicle identification information, such as registration or other identification numbers.</p>	<p><u>"Remote sensing" means the measurement of motor vehicle emissions through electronic or light-sensing equipment from a remote location such as the roadside. Remote sensing equipment may include devices to detect and record the vehicle's registration or other identification numbers.</u></p> <p>Modification of definition necessary to conform to enabling legislation.</p>
9VAC5-91-20			<p><u>"Specific engine family" means a group of motor vehicles with the same vehicle type, make, year and engine size.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-91-20			<p><u>"Vehicle emissions index" means the ranking of probable emissions inspection failure-rates of affected motor vehicles. Values within the index are determined by calculating a percentile of the historical emissions inspection failure-rates of a specific engine family, and comparing that to the historical emissions inspection failure-rates of all engine families in a specific model year group. Motor vehicles with the highest percentage of failure rates have the highest ranking on the index. Failure rates are based on the two most recent calendar years of emissions</u></p>

			<p><u>inspection test data from the Virginia Motor Vehicle Emissions Control Program.</u></p> <p>Definition necessary to implement the clean screen program.</p>
9VAC5-9 1-30 A			<p><u>6. Any on-road emissions inspector conducting on-road testing.</u></p> <p>Modification necessary to implement the clean screen program.</p>
9VAC5-9 1-30 C			<p><u>3. Clean screen vehicles may be determined by the director to be in compliance with the enhanced emissions inspection required by this chapter.</u></p> <p>Modification necessary to implement the clean screen program.</p>
9VAC5-9 1-180		Emissions standards for on-road testing through remote sensing.	<p><u>On-road high emitter emissions standards for on-road testing through remote sensing.</u></p> <p>Modification necessary for clarity relative to the clean screen program.</p>
9VAC5-9 1-180 A		A. No affected motor vehicle shall exceed the emissions standard for carbon monoxide (CO), the emission standard for hydrocarbons (HC) or nitric oxide (NO), set forth in Table III-B when measured with a remote sensing device and in accordance with the inspection procedures prescribed in Part XII (9VAC5-91-740 et seq.).	<p>A. No affected motor vehicle shall exceed the <u>on-road high emitter emissions standard standards</u> for carbon monoxide (CO), <del>the emission standard</del> for hydrocarbons (HC) or nitric oxide (NO), <del>set forth in Table III-B</del> when measured with a remote sensing device and in accordance with the inspection procedures prescribed in Part XII (9VAC5-91-740 et seq.).</p> <p>Modification necessary for clarity relative to the clean screen program.</p>
9VAC5-9 1-180			<p><u>B. The on-road high emitter emissions standards for a vehicle shall be determined by multiplying the value in the Table III-B of 9VAC5-91-180 by the ASM 25-25 standard in 9VAC5-91-810 or two speed idle standard in Table III-A of 9VAC5-91-160 as is applicable for the vehicle.</u></p> <p>Provision added for clarity and to implement the clean screen program.</p>
9VAC5-9 1-180 B		B. Any affected motor vehicle determined to have exceeded any emissions standards in Table III-B when measured by a remote sensing device in accordance with the	<p><del>B.</del> <u>C. Any affected motor vehicle determined to have exceeded any on-road high emitter emissions standards in Table III-B when measured by a remote sensing device in accordance</u></p>

		<p>procedures of Part XII (9VAC5-91-740 et seq.) may be subject to an emissions inspection at an emissions inspection station in accordance with Part XII (9VAC5-91-740 et seq.) or a civil charge in accordance with § 46.2-1178.1 B of the Code of Virginia, or both.</p>	<p>with the procedures of Part XII (9VAC5-91-740 et seq.) may be subject to an emissions inspection at an emissions inspection station in accordance with Part XII (9VAC5-91-740 et seq.) or a civil charge in accordance with § 46.2-1178.1 B of the Code of Virginia, or both.</p> <p>Modification necessary for clarity relative to the clean screen program.</p>
9VAC5-91-180 C		<p>C. Beginning January 1, 2005, motor vehicles that exceed the emissions standards in Table III-B two days in any 120 day period shall be considered to have violated the emissions standards. In addition, the department may use the high emitter index as a screening requirement.</p>	<p><del>CD.</del> <u>Beginning January 1, 2005, motor Any affected motor vehicles vehicle that exceed exceeds the on-road high emitter emissions standards in Table III-B two days in any 120 day period shall be considered to have violated the emissions standards. In addition, the department may use the high emitter vehicle emissions index as a screening requirement.</u></p> <p>Modification necessary for clarity relative to the clean screen program.</p>
9VAC5-91-180 D		<p>D. Beginning July 1, 2005, or later date based on analysis of remote sensing failure rates and confirmation test results, the department may determine that an affected vehicle is a high emitter if the vehicle exceeds the emissions standards in Table III-B once and is also determined to have a high emitter index of greater than 75.</p>	<p><del>DE.</del> <u>Beginning July 1, 2005, or later date based on analysis of remote sensing failure rates and confirmation test results, the department may determine that an Any- affected motor vehicle is a high emitter if the vehicle which exceeds the on-road high emitter emissions standards in Table III-B once and is also determined to have a high emitter vehicle emissions index of greater than 75 shall be considered to have violated the on-road high emitter emissions standards.</u></p> <p>Modification necessary for clarity relative to the clean screen program.</p>
9VAC5-91-180 E		<p><del>EF.</del> All remote sensing measurements used to determine if a vehicle exceeds emissions standards prescribed in Table III-B shall be taken at valid sites under conditions at which the vehicle specific power (VSP) indicator is between 3 and 22. Standards for NO shall be corrected for VSP using the following formula:</p> <p><i>NO standard = Low Range Standard</i></p>	<p><del>EF.</del> All remote sensing measurements used to determine if a vehicle exceeds <u>the on-road high emitter emissions standards prescribed in Table III-B shall be taken at valid sites under conditions at which the vehicle specific power (VSP) indicator is between 3 and 22. Standards for NO shall be corrected for VSP using the following formula:</u></p> <p><i>NO standard = Low Range Standard</i></p>

		<p>where:</p> <p>Low Range Standard = the smaller values in Table III-B in the NO (ppm) Range column;</p> <p>VSP = vehicle specific power indicator; and</p> <p>High Range Standard = the larger values in Table III-B in the NO (ppm) Range column.</p>	<p>where:</p> <p>Low Range Standard Value = the smaller values in Table III-B in the NO (ppm) Range column;</p> <p>VSP = vehicle specific power indicator; and</p> <p>High Range Standard Value= the larger values in Table III-B in the NO (ppm) Range column.</p> <p>Modification necessary for clarity relative to clean screen program.</p>
9VAC5-91-180 F		<p>F. The department may adjust the standards in Table III-B if it is determined that a standard is causing a confirmation test pass rate in excess of 20% or less than 5.0%. Such adjustments may be for specific models within each model year group based on manufacturer's emissions control technology.</p>	<p><del>EG.</del> The <del>department</del> <u>director</u> may adjust the <del>standards</del> <u>values</u> in Table III-B if it is determined that <u>a an on-road high emitter emissions standard</u> is causing a confirmation test pass rate in excess of 20% or less than 5.0%. Such adjustments may be for specific models within each model year group based on manufacturer's emissions control technology.</p> <p>Modification necessary for clarity and to implement the clean screen program.</p>
		<p>TABLE III-B. EXHAUST EMISSION STANDARDS FOR REMOTE SENSING.</p>	<p><del>TABLE III-B. EXHAUST EMISSION STANDARDS FOR REMOTE SENSING.</del></p> <p>Table III-B deleted and new Table III-B created establishing high emitter values used in conjunction with the values in Table III C to establish on road clean screen maximum standards. Modification necessary to implement the clean screen program.</p>
	9VAC5-91-185		<p><u>Clean screen vehicle emissions standards for on-road testing</u></p> <p>New section necessary to implement the clean screen program.</p>
	9VAC5-91-185 A	<p>G. Beginning July 1, 2005, clean screen vehicles will be identified inspector using on-road testing equipment measurements based on all of the following criteria:</p>	<p><del>GA.</del> Beginning July 1, 2005, <u>clean screen vehicles will shall be identified by an on-road emissions inspector using on-road testing equipment measurements based on all of the following criteria until the</u></p>

		<p>1. Up to 5.0% of the number of vehicles measured during any 30-day period may be identified as clean screen vehicles. This percentage may be evaluated annually by the department and adjusted based on the amount of emissions reduction lost due to clean screening.</p> <p>2. Vehicles that have the cleanest measurements based on an average of at least three measurements (taken on three different days in a 120-day time period) may be identified as clean screen vehicles as determined by the percentage of the applicable standards.</p> <p>3. Vehicles must have no measurements exceeding the standards in Table III B (taken on three different days in a 120-day time period as required in subdivision 2 of this subsection) to be identified as clean screen vehicles.</p> <p>4. Vehicles must not be equipped with an OBD system unless DEQ makes a determination to include certain OBD model years based on evidence that there would not be a significant loss in emissions reduction benefits.</p>	<p><u>provisions of subsection B of this section become effective according to the schedule in subsection D of 9VAC5-91-740:</u></p> <p>1. Up to 5.0% of the number of vehicles measured during any 30-day period may be identified as clean screen vehicles. This percentage may be evaluated annually by the department and adjusted based on the amount of emissions reduction lost due to clean screening.</p> <p>2. Vehicles that have the cleanest measurements based on an average of at least three measurements (taken on three different days in a 120-day time period) may be identified as clean screen vehicles as determined by the percentage of the applicable standards.</p> <p>3. Vehicles must have no measurements exceeding the <u>on-road high emitter emissions standards standard in Table III B (taken on three different days in a within the 120-day time period as required in subdivision 2 of this subsection) to be identified as clean screen vehicles.</u></p> <p>4. Vehicles must not be equipped with an OBD system unless DEQ makes a determination to include certain OBD model years based on evidence that there would not be a significant loss in emissions reduction benefits.</p> <p>Modification necessary for clarity between existing program and clean screen program.</p>
	<p>9VAC5-91-185 B, C, D and E</p>		<p><u>B. Vehicles shall be identified as clean screen vehicles by an on-road emissions inspector using on-road testing based on the following criteria:</u></p> <p><u>1. The vehicle is due for an emissions inspection test within 120 days;</u></p> <p><u>2. The result of the most</u></p>

			<p><u>recent initial emissions test on record with the Department is not a "fail";</u></p> <p><u>3. No on-road emissions measurement since the most recent initial emissions test exceeds the on-road high emitter emissions standards as determined according to 9VAC5-91-180 B;</u></p> <p><u>4. The two most recent on-road emissions measurements taken within 12 months of the registration expiration date shall not exceed the clean screen standards as determined in subsection D of this section and the vehicle must have a vehicle emissions index no greater than 80; or</u></p> <p><u>5. The most recent on-road emissions measurement taken within 12 months of the registration expiration date shall not exceed the clean screen standards as determined in subsection D of this section and the vehicle shall have a vehicle emissions index no greater than 75.</u></p> <p><u>C. On an annual basis, at least 2% of the vehicles meeting the clean screen criteria in subsection B of this section shall not be notified of the clean screen and may receive an emissions test at an emission inspection station. The Department shall analyze these test results to determine the effect of on-road testing on total emissions reductions. The Director may decrease the maximum vehicle emissions index specified in subdivision B 4 and 5 of this section as necessary to ensure compliance with federal requirements in accordance with 9VAC5-740 F.</u></p> <p><u>D. The clean screen vehicle standards are determined as a percentage of the values in Table III-C. The Director may adjust the percentage between 50% to 80% to ensure compliance with federal requirements in accordance with 9VAC5-740 F.</u></p> <p><u>E. The Director may exempt certain vehicle models with known emissions</u></p>
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			<p><u>related deficiencies.</u></p> <p>New provisions necessary to implement the clean screen program.</p>
9VAC5-180		<p>H. At the discretion of the director, vehicles identified as clean screen vehicles in accordance with subsection G of this section may be recorded as having passed the next emissions inspection required by § 46.2-1183 of the Code of Virginia and the result shall be entered into the emissions inspection record for that vehicle.</p>	<p><del>HF. At the discretion of the director, vehicles identified as clean</del> <u>Clean</u> screen vehicles in accordance with <del>subsection G of this section</del> <u>subsection G of this section</u> may be recorded as having passed the next emissions inspection required by <del>§ 46.2-1183</del> <u>§ 46.2-1178.1 E</u> of the Code of Virginia and the result shall be entered into the emissions inspection record for that vehicle.</p> <p>Modification necessary to implement the clean screen program.</p>
	9VAC5-91-185		<p><u>TABLE III-C</u> <u>On Road Clean Screen Maximum Standards</u></p> <p>Table III-C created which is used in conjunction with Table III-B to establish on road clean screen maximum standards. Table III-C necessary to implement the clean screen program.</p>
	9VAC5-91-290 J and K		<p><u>J. Emissions inspections and vehicle safety inspections may be performed in the same service bay, provided that the facility is both an emissions inspection station and an official safety inspection station in accordance with to §§ 46.2-1163 and 46.2-1166 of the Code of Virginia.</u></p> <p><u>K. Emissions inspections may be performed in the inspection area of the emissions inspection station or, if by wireless means, in any other area on the premises of the emissions inspection station provided that all applicable test components can be performed at that location.</u></p> <p>New provisions necessary to conform to enabling legislation.</p>
9 VAC 5-91-320 D		<p>11. Dedicated phone line for use by the analyzer system in emissions inspection stations except fleet emissions inspection stations which have been authorized by the director to use a nondedicated phone line pursuant to an agreement between</p>	<p>11. Dedicated phone line <u>or web-based internet connection</u> for use by the analyzer system in emissions inspection stations except fleet emissions inspection stations which have been authorized by the director to use a nondedicated phone line</p>

		the director and the fleet emissions inspection station, based on vehicle maintenance or registration cycles.	pursuant to an agreement between the director and the fleet emissions inspection station, based on vehicle maintenance or registration cycles.  Modification necessary to conform to enabling legislation.
9VAC5-91-740 B		B. The emissions standards for the on-road remote sensing program are those contained in Table III-B in 9VAC5-91-180.	B. The emissions standards for the on-road remote sensing program are <del>those contained in Table III-B in 9VAC5-91-180</del> <u>the on-road high emitter emissions standards, the clean screen vehicle standards, or both.</u>  Modification necessary to implement the clean screen program.
9VAC5-91-740 C		C. The on-road testing program and the emissions standards applicable thereto shall apply to affected motor vehicles registered in the program area and any affected motor vehicles operated primarily in the program area.	C. The on-road testing program <u>and clean screen program and including</u> the emissions standards applicable thereto shall apply to <u>any</u> affected motor vehicles registered <del>in the program area and any affected motor vehicles</del> <u>or</u> operated primarily in the program area.  Modification necessary to implement the clean screen program.
	9VAC5-91-740 D, E, F, G, H, and I		D. <u>An on-road clean screen program shall be implemented according to the following schedule:</u>  <u>1. On and after July 1, 2012, and before July 1, 2013, an on-road clean screen program shall be limited to no more than 10% of the motor vehicles described in subsection C of this section which are eligible for emissions inspection during the applicable 12-month period;</u>  <u>2. On and after July 1, 2013, and before July 1, 2014, an on-road clean screen program shall be limited to no more than 20% of the motor vehicles described in subsection C of this section which are eligible for emissions inspection during the applicable 12-month period; and</u>  <u>3. On and after July 1, 2014, an on-road clean screen program shall be limited to no more than 30% of the motor vehicles described in</u>

			<p><u>subsection C of this section which are eligible for emissions inspection during the applicable 12-month period.</u></p> <p><u>E. The on-road emissions inspector shall issue a clean screen vehicle notification to owners of affected motor vehicles which have met the clean screen emissions standards. The notification shall be issued in a timeframe compatible with the Division of Motor Vehicles vehicle registration renewal notification.</u></p> <p><u>F. A motor vehicle owner who has received a clean screen vehicle notification may choose to meet the vehicle registration requirements of § 46.2-1183 of the Code of Virginia by participating in the clean screen program according to § 46.2-1178.1 E of the Code of Virginia.</u></p> <p><u>G. The on-road emissions inspector performing on-road testing under this subsection may charge each motor vehicle owner who elects to participate in the on-road clean screen program an inspection fee in an amount as designated in § 46.2-1182 of the Code of Virginia.</u></p> <p><u>H. The director may reduce the percentage of vehicles eligible to participate in the on-road clean screen program as is necessary to meet applicable air quality requirements under the federal Clean Air Act in accordance with § 46.2-1178 C of the Code of Virginia.</u></p> <p><u>I. At the discretion of the director, the implementation or operation of the clean screen program may be suspended or revoked for failure to operate in accordance with the provisions of Article 22 of the Code of Virginia and the regulations adopted there under.</u></p> <p>New provisions necessary to implement the clean screen program.</p>
<p>9 VAC 5-91-750</p>		<p>Operating procedures; violation of standards.</p>	<p>Operating procedures; violation of <u>on-road high emitter standards.</u></p>

			Modification necessary for clarity relative to the clean screen program.
9 VAC 5-91-750 B		B. Motor vehicles determined by remote sensing equipment to have exceeded the applicable emissions standard in Table III-B in 9 VAC 5-91-180 shall be considered to have violated such emissions standards.	B. Motor vehicles determined by remote sensing equipment to have exceeded the <del>applicable emissions standard</del> <u>on-road high emitter standards in Table III-B in 9 VAC 5-91-180</u> shall be considered to have violated such emissions standards.  Modification necessary for clarity relative to the clean screen program.
9 VAC 5-91-750 D		D. The requirement for an emissions inspection or payment of civil charges, based on a remote sensing failure, may be waived by the department if the affected motor vehicle in question is, by virtue of its registration date, required to have an emissions inspection within three months of the date of the remote sensing measurement that indicates the vehicle has exceeded the applicable standards in Table III B in 9 VAC 5-91-1802; or (ii) has received a waiver within the 12 months prior to the violation.	D. The requirement for an emissions inspection or payment of civil charges, based on a remote sensing failure, may be waived by the department if the affected motor vehicle in question is, by virtue of its registration date, required to have an emissions inspection within three months of the date of the remote sensing measurement that indicates the vehicle has (i) exceeded the <del>applicable standards in Table III B in 9 VAC 5-91-1802</del> <u>on-road high emitter emission standards</u> ; or (ii) has received a waiver within the 12 months prior to the violation.  Modification necessary for clarity relative to the clean screen program.

**Regulatory flexibility analysis**

*Please describe the agency’s analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: (1) the establishment of less stringent compliance or reporting requirements; (2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; (3) the consolidation or simplification of compliance or reporting requirements; (4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and (5) the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.*

The regulation applies to affected vehicles registered or operated primarily in the Northern Virginia area. Vehicles must be presented to emissions inspection stations biennially to receive and pass an emissions inspection (or receive a waiver) prior to vehicle registration. The clean screen program will provide another option for obtaining the emissions inspection necessary for vehicle registration with no adverse impact to the air quality in the region. Some vehicle owners may find the use of the clean screen notification more convenient and efficient for meeting the emissions inspection requirement.

The current I/M program is enforced through vehicle registration via the Department of Motor Vehicles (DMV). Any information pertaining to less stringent compliance, schedules or deadlines for compliance or the consolidation or simplification of compliance or reporting requirements must be coordinated with the DMV. The current reporting procedures proposed for the clean screen program are structured to work within the current parameters of the massive DMV database. No performance standards or exemptions exist for small business; all vehicles, except those expressly identified via regulation are subject to the I/M program.

### Family impact

*Assess the impact of this regulatory action on the institution of the family and family stability.*

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It is not anticipated that these regulation amendments will have a direct impact on all families within the program area. However, for the vehicles identified in the clean screen program it will provide an additional option for vehicle registration. There will be positive indirect impacts in that the regulation amendments will ensure that the Commonwealth's air pollution control regulations will function as effectively as possible, thus contributing to reductions in related health and welfare problems.

### Acronyms and Definitions

*Please define all acronyms used in the Agency Background Document. Also, please define any technical terms that are used in the document that are not also defined in the "Definition" section of the regulations.*

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ASM- Acceleration Simulation Mode  
CFR- Code of Federal Regulations  
DMV-Department of Motor Vehicles  
EPA- federal Environmental Protection Agency  
I/M- Inspection and maintenance  
NO<sub>x</sub>-Nitrogen oxides  
OBD- On-Board Diagnostics Systems

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