

DEPARTMENT OF THE ENVIRONMENT  
AIR AND RADIATION MANAGEMENT ADMINISTRATION

**RESPONSE TO COMMENTS**

for the

PUBLIC HEARING held on October 5, 2015  
in BALTIMORE, MD  
related to amendments to COMAR 26.11.24

Purpose of Hearing: The purpose of the public hearing was to allow for public comment on the Department's proposal to amend COMAR 26.11.24 Vapor Recovery at Gasoline Dispensing Facilities.

The purpose of this action is to allow new gasoline dispensing facilities (GDFs) and GDFs undergoing major modifications the option to choose not to install or decommission existing Stage II vapor recovery equipment. Existing GDFs may decommission Stage II vapor recovery equipment after October 1, 2016.

Date and Location: The public hearing was held on October 5, 2015 at 10 a.m. at the Department of the Environment, 1800 Washington Boulevard, 1st Floor Conference Room, Baltimore, Maryland 21230.

Attendance: Tom Ruszin, Royal Farms, Ellen Valentino, MAPDA, Kirk McCauley, WMDA, Donnie Beard, Spigler Petroelum Equipment, Herb Memor, Drisler Fuel, Tom Watkins, Tevis Oil Inc., Scott Thompson, MDE, Richard Negrete GPIN Investments, Shawn Schemelser, MDTA, Sandra Carl, Sunoco, Markus Hilpert, Johns Hopkins, Carolyn Jones, MDE and Megan Ulrich, MDE.

Statement: Husain Waheed, Senior Engineer of the Regulation Development Division of the Air and Radiation Management Administration, Maryland Department of the Environment, served as Hearing Officer. The Department's statement was read by Joshua Shodeinde, Regulatory and Compliance Engineer of the Regulation Development Division of the Air and Radiation Management Administration.

Comments and Responses: Comments were received from the Maryland Petroleum Council, Royal Farms, Mid-Atlantic Petroleum Distributors Association, Washington, Maryland, Delaware Association (Service Station and Automotive Repair Association) and John's Hopkins University Collective. The written comments received, in some instances, have been summarized and the Department's response given below.

**1. COMMENT:** The requirement under .01-1B(7) and .04A(7) for TP-201.3C "tie-tank test" for non-Stage II systems is not necessary as the test is designed to check vapor piping (and there shouldn't be any vapor piping for non-Stage II systems, except just to the vent pipe). It is possible that the requirement could be for TP-201.3 leak test, since

that would be consistent with what is required by Federal GD-GACT regulations at 40 CFR 63 Subpart CCCCCC [§63.11120(a)(2)(i)].

TP-201.3C actually requires that you (a) do either a concurrent TP-201.4 test (which really only applies to Stage II systems) or preliminary TP-201.3 test prior to the TP-201.3C test (per Section 2 of TP-201.3C), and then (b) do another TP-201.3 test after the TP-201.3C test (per Sections 6.1.5 and 6.3.2 of TP-201.3C).

It is possible that TP-201.3C was considered a “newer version” of TP-201.3, but in fact TP-201.3, 201.3A, 201.3B, and 201.3C are all separate test methods, as shown in <http://www.arb.ca.gov/testmeth/vol2/currentprocedures.htm>.

**RESPONSE:** CARB TP201.3C Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test) is required to ensure that the gasoline storage tanks are manifolded together, either underground or above ground. Stage II systems are manifolded because there is only one vapor line that returns vapors to the underground storage tanks. During decommissioning, the manifolds could be removed. If the tanks are not manifolded, then a separate pressure decay test would need to be performed on each tank to ensure the tank system is vapor tight. Therefore, TP 201.3C should be performed to ensure the pressure decay test is testing the entire tank system. It also will determine what tanks a tanker driver can recover vapors from when a delivery is made and the vapor balance line is hooked up.

TP201.3C does require a TP201.3 test prior to conducting the test. This allows the system to be pressurized in order to perform TP 201.3C. If the tanks are manifolded above ground, the vent manifold is removed prior to TP 201.3C. Once the test is conducted, the manifold is put back in place and TP 201.3 is performed to ensure the manifold is vapor tight again. If the tanks are manifolded below ground, there is no manifold to remove and a second TP 201.3 test is not necessary.

The Department would further note that the states of Massachusetts, Connecticut, Georgia and Arizona also require TP 201.3C after decommissioning Stage II vapor recovery systems.

**2. COMMENT:** The Federal requirements for Stage II vapor recovery actually refer to the 1999 version of TP-201.3, whereas the latest ARB version is the 2012 version. To avoid conflicting requirements/having to conduct two different versions of the same test, it would probably be easiest to just ask Maryland to either (a) specify the 1999 version as well, or (b) specify that the 2012 version is an approved alternative to the 1999 version and therefore is acceptable for complying with 40 CFR 63 Subpart CCCCCC requirements.

**RESPONSE:** Under COMAR 26.11.24.01-1 – Incorporation by Reference, the Department formally incorporated the California Air Resources Board’s Vapor Recovery Test Procedure (TP-201.3C) Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test) adopted March 17, 1999. When comparing the

two versions of TP-201.3, the only change from 1999 to 2012 is the change of a conversion factor for determining approximately how long it would take to pressurize the system to 2 inches of Nitrogen to start the test. It allows the tester to minimize the amount of nitrogen introduced into systems that cannot hold the pressure. There was no change to the actual testing procedures. The Department proposes to add “1999” to COMAR 26.11.24.01-1B(7) to avoid any possible confusion on this issue.

**3. COMMENT:** The regulations provide relief to hundreds of small business owners and at the same time provide a benefit to the environment. The regulations have gone through an extensive stakeholder process and the industry is happy with the proposal. The regulations will encourage station owners to upgrade dated tank systems and improve Maryland’s air quality.

**RESPONSE:** The Department agrees that the proposed regulations provide regulatory relief to owners of GDF’s and has the potential to achieve multimedia environmental benefits should tank systems be upgraded.

**4. COMMENT:** The proposed decommissioning of Stage II vapor recovery and the construction of new gasoline dispensing facilities without Stage II would result in unnecessary exposures to gas station employees, consumers and nearby residents. Toxic and carcinogenic chemicals in fuels are a public health concern and epidemiological studies have shown statistical increases in cancer risks for gas station workers while there have been very few studies on health risks faced by residents living near gas stations.

**RESPONSE:** On May 16, 2012, the U.S. Environmental Protection Agency (EPA) finalized the rule Widespread Use for Onboard Refueling Vapor Recovery (ORVR) and Stage II Waiver.” Section 202(a)(6) of the Clean Air Act allows the EPA to revise or waive certain requirements of the Stage II vapor recovery program in ozone nonattainment areas when the EPA Administrator finds that ORVR systems are in widespread use in the highway vehicle fleet. EPA has determined that the criteria for widespread use of ORVR was met on May 16, 2012, based on national data. Given the widespread use of ORVR, Stage II control systems now provide increasingly less air pollution reduction beyond what is provided by ORVR and therefore are increasingly less cost effective. ORVR technology for collecting vapors on modern cars has largely made Stage II systems redundant. By 2017, Maryland’s fuel consumption by vehicles equipped with ORVR will be 93.5 percent of the fuel consumed in Stage II areas of Maryland. By 2020 this figure will increase to 96.0 percent.

Regarding exposure to toxics, there is a lack of detailed and robust data on the specific contribution of benzene released from gas stations to benzene air concentrations in and around gas stations, particularly with respect to the potential for impacts to surrounding communities. Over time, non-ORVR vehicles will continue to be replaced with ORVR vehicles. Stage II and ORVR emission control systems are redundant, and EPA has determined that ORVR emission reductions are essentially equal to and will soon surpass

the emission reductions achieved by Stage II alone. Maintaining Stage II systems may ultimately result in greater emissions due to incompatibility of Stage II and ORVR.

**5. COMMENT:** Removal of Stage II vapor recovery will not capture refueling vapors from legacy vehicles and all motorcycles and boats lacking ORVR. Without Stage II vapor recovery, 10 percent of gasoline consumed in Maryland will have no controls in 2015. The Maryland Department of the Environment's analysis (Meszler Engineering Services, 2012) states that 0.17 tons of volatile organic compound (VOC) reduction can be achieved with existing vacuum assist Stage II technology in 2020. Up to 3 tons of VOC reductions in 2020 can be achieved if Stage II regulations are strengthened to require vapor balance technology which does not interfere with ORVR.

**RESPONSE:** When Maryland's amendments to the Stage II vapor recovery regulations take effect, only 6.5 percent of fuel consumed will be without vapor recovery. This figure reduces to 4 percent by 2020 and is expected to reduce further beyond this date. Through MDE's stakeholder process it was determined that the benefit provided by Stage II vapor recovery does not justify the expense of maintaining, inspecting and testing the systems. Additionally, the benefits provided by requiring enhancements to Maryland's Stage II systems would not justify the cost.

The EPA conducted an economic assessment to support the final May 16, 2012 widespread use determination rule. EPA estimated that for an average size gasoline dispensing facility (GDF) the annual cost to maintain existing Stage II systems is about \$3,000 per year. These total costs would be incurred by GDF operators each year to cover ever decreasing annual emission reduction benefits as measured by the increment calculation.

**6. COMMENT:** Employing efficient, redundant pollution prevention technology, such as vapor balance Stage II, might be economically advantageous if health benefits and energy savings are taken into account. The proposed action does not account for a comprehensive cost analysis including not only the cost of implementation and maintenance of pollution control technologies, but also for related health care costs. With the recent lowering of the ozone standard by EPA to 70 ppb, enhanced vapor recovery might be required and new stations would have to install costly controls. The commenter suggests that consumers could help share the cost of enhanced pollution controls with gas station owners. Considering the complexities of chemical fate and transport in the environment and the history of insufficient toxicity testing it would be beneficial to consider appropriate and redundant pollution prevention technology to minimize release of chemicals with known health effects.

**RESPONSE:** Over time, non-ORVR vehicles will continue to be replaced with ORVR vehicles. The ORVR control measure is expected to result in a significant decrease in emissions over time until all subject vehicle classes in the highway vehicle fleet are ORVR-equipped. Stage II and ORVR emission control systems are redundant, and, EPA has determined that ORVR emission reductions are essentially equal to and will soon

surpass the emission reductions achieved by Stage II alone. By waiving the Stage II requirement, EPA is reducing regulatory burdens on the gasoline service station industry.

The Department followed the guidance provided by EPA to determine when widespread use was achieved in Maryland and followed the procedures for repealing Stage II vapor recovery requirements. EPA conducted economic analysis supporting the widespread use rule which was utilized by the Department in its determination.

MDE agrees that EPA's new 70 ppb ozone standard will continue to push Maryland to find new ways to reduce emissions in the State, though primarily NO<sub>x</sub> emissions. In the eastern US, natural biogenic sources usually dominate hydrocarbon reactivity, making NO<sub>x</sub> the limiting precursor to ozone. Research conducted by the University of Maryland indicates that from the 1970's thru the early 2000's Maryland's air quality responded to both VOC and NO<sub>x</sub> reductions. This has now changed and it can be seen that since the mid-2000's Maryland has transitioned into a NO<sub>x</sub> limited regime. Therefore, NO<sub>x</sub> reductions now provide a greater benefit in reducing ozone levels in Maryland.

To meet the 70 ppb ozone standard, MDE will need reductions from other sectors, such as mobile sources, and reductions from upwind states to reduce ozone transported from upwind states into Maryland. About 70% of Maryland's ozone problem comes from upwind states. Mobile sources are the largest local contributor to Maryland ozone (about two thirds of Maryland's local contribution). Notwithstanding these issues, Maryland continues to make tremendous progress on lowering ozone levels in the State.

Should Maryland continue to struggle meeting the new ozone standard, the Department has indicated that new technologies at GDFs will be explored. Several emerging technologies have been shown to provide significant reductions in VOC emissions and toxic exposures at GDFs. New technologies, such as dripless nozzles and low permeation hoses, have either recently become certified by the California Air Resources Board or are under review. These technologies have been proven to reduce impacts on air, water and land, reduce public health risks and generate energy savings. They provide significant benefit with minimal cost and in some instances are economically cheaper over their life-cycle as compared to traditional equipment. The Department believes these technologies may naturally make their way into the market. Additional technologies, such as pressure monitoring and management, further ensure that VOC emissions are minimal at GDFs. The Department will consider future amendments to the regulations requiring new technologies as these items become commercially available and if emission reductions are needed for air quality attainment.