



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

OFFICE OF THE
SECRETARY

89 KINGS HIGHWAY
DOVER, DELAWARE 19901

PHONE: (302) 739-9000
FAX: (302) 739-6242

Secretary's Order No. 2015-A-0030

Re: Approving Amendment to Section 36 "Stage II Vapor Recovery" in Regulation 1124 "Control of Volatile Organic Compound Emissions" of Regulations Governing the Control of Air Pollution, 7 DE Admin. Code 1124

Date of Issuance: August 17, 2015
Effective Date: September 11, 2015

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department") pursuant to *7 Del C. §§6006 and 6010*, the following findings of fact based on the record, reasons and conclusions are entered as an Order of the Secretary in the above-referenced agency regulation proceeding.

Background, Procedural History and Findings of Fact

This Order considers the Department's Division of Air Quality ("DAQ") proposal to amend Section 36 "Stage II Vapor Recovery" of *7 DE Admin. Code 1124*, which is entitled "Control of Volatile Organic Compound Emissions" within the Department's *Regulations Governing the Control of Air Pollution, 7 DE Admin Code 1100 et seq.* ("Air Quality Regulations").

DAQ prepared a proposed amendment, which was published in the June 1, 2015 *Delaware Register of Regulations* ("Amendment"). The Department received public comments on the proposed amendment during a June 25, 2015 public hearing before Department's presiding hearing officer, Robert P. Haynes, who prepared the attached Hearing Officer's Report ("Report") that reviews the record, considers the public

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comments and recommends approval of the Amendment, as set forth in Appendix “A” of this Order.

DAQ prepared the Amendment to modify the regulation of Volatile Organic Compound (“VOC”) emissions from gas dispensing facilities (“GDFs”). The VOC emissions are from the gasoline vapor released by GDFs when their storage tanks are filled or when pumps are used to re-fuel vehicles. The Department finds that GDFs release of gasoline vapor should be controlled as much as reasonably possible because of the adverse impact such emissions have on air quality and human health.

DAQ’s expert, Ron Amirikian, explained that gasoline vapors, if allowed to escape into the air, can contribute significantly to ground-level ozone, a pollutant known as ‘smog.’ The Department finds that reducing VOC emissions from all sources that contribute to the formation of ozone is critical to Delaware, which does not meet federal air quality standards for ozone. The federal standards are based on the adverse health consequences of breathing air that does not meet the ozone standards. Consequently, Delaware residents are at risk from air quality with excessive levels of ozone, which may cause them to suffer reduced lung function and to experience increased respiratory problems such as asthma attacks or difficulty breathing.

DAQ provided for the record the adverse consequence from gasoline vapor emissions in addition to impairing air quality by increasing ozone pollution. DAQ also seeks to reduce gasoline vapor emissions from GDFs because they contain toxic air pollutants associated with a variety of adverse health conditions and illnesses. One pollutant in gasoline vapors is benzene, which is a human carcinogen that any exposure over time can increase the risk of developing cancers such as leukemia. Benzene also can affect the central nervous system, the respiratory tract and the immune system.

Ethylbenzene, another chemical found in gasoline vapor, may also cause cancer, as well as developmental problems, and harm the kidney and liver. Other pollutants are toluene and xylenes, which can affect the central nervous system, liver and kidneys, and have the potential to affect fetal development. Thus, the Department's action to amend its Air Quality Regulations to reduce the harmful emissions of gasoline vapors from GDFs is well-documented and rationally related to the Department's statutory purposes to "control of pollution of the land, water, underwater and air resources of the State to protect the public health, safety and welfare." *7 Del. Code §6001(c)(2)*.

The Department finds that DAQ's research, as provided in the record, is extensive and reasonable, and adequate to support the Amendment. DAQ experts relied on work developed for the California Air Resource Board ("CARB"), which is a leader in regulation for GDFs' gasoline vapor emissions. CARB regulations are used by many states as a model for air quality regulations. Indeed, the CARB regulations provided some of the regulatory basis for the current regulation. The proposed amendment is well-supported by over two hundred pages of regulatory documents from CARB proceedings that established regulations for GDF gasoline vapor emissions. The Department finds that it is reasonable and prudent to rely of CARB regulations that DAQ's experts have determined are appropriate for use in Delaware.

Delaware's current regulation of gasoline vapor emissions by GDFs is similar to other states and is based upon federal regulation. The current Section 36 requires GDFs to use "Stage II" vapor control equipment for controlling emissions from GDFs' pumps during the re-fueling of vehicles. The Amendment will allow new GDF or GDF that are being modified the option to not install and use Stage II vapor control equipment ("Stage II equipment"). The Amendment will further require these GDFs that will not use Stage

II equipment to install and use enhanced Stage I vapor control equipment for the control of emissions during the filling of the GDFs' underground storage tanks. The Amendment also allows these GDFs to elect to participate in a one year trial demonstration of CARB approved continuous pressure monitoring ("CPM") systems for their storage tanks, or to submit to the Amendment's monitoring and testing requirements for the storage tanks. The data collected from the CPM system trial demonstration participating GDFs will be used by the Department to determine future changes to the Air Quality Regulations.

The Department finds that Section 36 should be changed because Stage II equipment, as it currently exists, is not compatible with on-board refueling vapor recovery ("ORVR") systems, which are installed on most gasoline powered motor vehicles.¹ Gasoline vapors that otherwise would be emitted during re-fueling operation are now controlled in most cars by ORVR systems. Thus, the Amendment recognizes this change in the control of the gasoline vapor emissions now regulated by Stage II equipment.

The Department finds that the Amendment provides a reasonable path to remove the requirement that new GDFs install Stage II equipment. In addition, if an existing GDF undergoes a modification of its pumps as defined by the Amendment, then the modified GDF could elect not to install Stage II equipment. The new and modified GDFs electing not to use Stage II equipment would be subject to the Amendment's requirement to install CARB certified enhanced Stage I equipment, which will provide improved control of gasoline vapor emissions. In addition, the Amendment would require these GDFs also to elect to either comply with the Amendment's testing and monitoring procedures, or participate in a trial demonstration of a CARB certified CPM system for

¹ The small engines, motorcycles and power boats do not have ORVR systems, as noted by Green Delaware's comments, but this represents a small portion of GDF users in Delaware because beginning with the 1998 model year, federal regulation mandated ORVR systems be phased-in most motor vehicles. DAQ estimates that by 2016 90% of Delaware cars will use ORVR systems.

its storage tanks. The Department finds that the Amendment provides a reasonable approach to allow GDFs to no longer use Stage II equipment under certain circumstance (new or modified GDF) and imposes a requirement to install newer and better Stage I equipment, and to subject their storage tanks to either a trial use of a CPM system or the testing procedures in the Amendment.

The Amendment will allow the use of CPM systems by GDFs, and this usage will allow for prompt detection of leaks and other problems that may cause gasoline vapor emissions. The one year trial use of CPM will also allow useful information to be collected on the storage tanks. DAQ has indicated that at least four GDFs have agreed to participate in the trial and this is an encouraging sign that GDFs are willing to install CPM systems when they no longer have Stage II equipment. The trial demonstration will assess how the CPM systems operate in Delaware, which was the concern raised when the 2014 amendment was proposed.

In sum, the Department finds that the record supports the adoption of the proposed amendment set forth in Appendix "A" as well-supported, reasonable, and consistent with the Department's purposes to reduce air pollution and improve public health.

Reasons and Conclusions

As the above findings clearly demonstrate that the Department's experts have provided ample support in the record for adopting the proposed amendment as a final regulation. The Report also recommends that the proposed amendment be adopted with minor changes recommended by DAQ. I agree that the proposed amendment recommended by the Report and by DAQ be adopted. Moreover, this Order adopts the Report's reasoning to supplement this Order.

DAQ also provided reasons why the public comment should not be adopted by making any substantive changes to the proposed amendment. The Report also agrees that the public comments did not warrant any change to the proposed amendment at this time, particularly before the examination of data from the trial use of CPM systems. I agree that the proposed amendment should be adopted now and any further changes should wait until the trial demonstration provides information on the effectiveness of CPM systems in Delaware. Thus, the reasons for adopting the Amendment are that it is well-supported by technical and scientific information, and it provides a reasonable method towards a regulatory transition from continued use of State II equipment and towards the use of new, improved control of gasoline vapor emissions from GDFs, including the use of enhanced Stage I equipment and CPM systems.

In conclusion, the Department enters the following reasons and conclusions:

1. The Department has the statutory authority in *7 Del. C. 6010* to promulgate regulations to administer its statutory duties;
2. The Department is empowered in *7 Del. C. Chap. 60* to regulate air emissions of air toxics and the pollutant VOC in order to protect the environment and public health from harm;
3. GDFs emit air toxics and the pollutant VOC during the fueling of motor vehicles and the filling of storage tanks;
4. The Department has determined that the emission of air toxics and VOC from GDFs poses a risk of harm to the environment and public health that should be regulated by a regulation requiring the option to install enhanced approved Stage I equipment to reduce GDFs' gasoline vapor emissions;

5. The proposed amendment to Section 36 of Regulation should be adopted as a reasonable and well-supported regulatory method to improve the air quality in Delaware by reducing GDFs' emissions of air toxics and VOC;
6. The Department conducted a proceeding consistent with the Department procedures, laws and regulations;
7. The Department provided public notice of the Amendment and the public hearing consistent with the law and Department regulations, and fully considered the public comments in the record;
8. The Department's proposed amendment, as published in the June 1, 2015 Delaware Register of Regulations and as revised for a non-substantial change in Appendix "A" hereto, is adequately supported by the record, is reasonable and not arbitrary or capricious exercise of the Department's authority to promulgate regulations, and is consistent with the applicable laws and regulations; and
9. The Department shall submit this Order approving as final the proposed amendment to Section 36 of Air Quality Regulation 1124, *7 DE Admin. Code 1124* to the *Delaware Register of Regulations* for publication in the next available issue and shall go into effect ten days after such publication, and shall provide such other notice as the law and regulation require and the Department determines is appropriate.



David S. Small,
Secretary

Appendix A
Final Regulation

1100 Air Quality Management Section

1124 Control of Volatile Organic Compound Emissions

36.0 ~~Stage II Vapor Recovery~~ Vapor Emission Control at Gasoline Dispensing Facilities

01/11/2002 09/11/2015

36.1 Applicability

36.1.1 The provisions of 36.0 of this regulation ~~applies~~ apply to any gasoline dispensing facility located in the State of Delaware, except:

36.1.1.1 Any gasoline dispensing facility, which never has a monthly throughput of greater than 10,000 gallons of gasoline, shall be subject only to the requirements of ~~36.5.2~~ 36.7.2 of this regulation. Any gasoline dispensing facility that ever exceeds this throughput shall be subject to all of the requirements of 36.0 of this regulation, and shall remain subject to these requirements even if its throughput later falls below the exemption throughput.

36.1.1.2 Any gasoline dispensing facility that is used exclusively for refueling marine vehicles, aircraft, farm equipment, or emergency vehicles.

36.1.2 ~~On and after May 1, 2003, the~~ The requirements of ~~36.6~~ 36.8 of this regulation apply to any owner or operator of any company that performs compliance testing of ~~Stage II Systems at gasoline dispensing facilities~~ within the State of Delaware.

36.1.3 The requirements of 36.0 of this regulation are in addition to all other State and Federal requirements, to include the Clean Air Act requirements in 40 CFR 80.22(j) and the permitting requirements of 7 DE Admin Code 1102. Any gasoline dispensing facility that is currently subject to any ~~state or federal~~ State or Federal rule promulgated pursuant to the Clean Air Act Amendments of 1977 by exceeding an applicability threshold is and shall remain subject to those provisions.

36.1.4 Compliance Schedule

Any gasoline dispensing facility subject to the requirements of 36.0 of this regulation shall be in compliance as follows: ~~Any facility that first commences operations:~~

36.1.4.1 Any new facility that first commences construction on or after the effective date of this revision of 36.0 of this regulation, or any facility that decommissions its Stage II vapor recovery system, shall do one of the following.

36.1.4.1.1 Comply with 36.4.2 and all other applicable requirements of 36.0 of this regulation, or

36.1.4.1.2 Participate in a trial to demonstrate whether or not a continuous pressure monitoring (CPM) system is able to accurately identify system leaks and times when emissions are being vented from the pressure/vacuum valve, by complying with 36.4.3 and all other applicable requirements of this regulation. Failure to demonstrate compliance with any of the requirements of this regulation due to fault or failure of the CPM system shall not constitute a violation of this regulation. The trial period is for a minimum period of one

year. Upon completion of the trial period any participating station has the option to either continue to comply with 36.4.3 or to comply with 36.4.2 of this regulation.

~~Before November 15, 1990 and that has any throughput of greater than 10,000 gallons but less than 100,000 gallons: by November 15, 1994 for facilities located in New Castle and Kent Counties, and by November 15, 1996 for facilities located in Sussex County.~~

36.1.4.2 An owner or operator of any modified facility may decommission its Stage II vapor recovery system pursuant to the procedures in 36.9 of this regulation on or after the effective date of this revision of 36.0 of this regulation.

~~Before November 15, 1990 and that has any throughput of at least 100,000 gallons: by November 15, 1993 for facilities located in New Castle and Kent Counties, and by November 15, 1995 for facilities located in Sussex County.~~

36.1.4.3 Any facility not identified in 36.1.4.1 of this regulation shall comply with 36.3 and all other applicable requirements of 36.0 of this regulation.

~~On or after November 15, 1990 and before January 11, 1993: by May 15, 1993 for facilities located in New Castle and Kent Counties, and by May 15, 1995 for facilities located in Sussex County.~~

~~36.1.4.4 On or after January 11, 1993: upon commencement of operations.~~

~~36.1.5 Any Stage II vapor recovery system installed prior to November 15, 1992, and using dual vapor recovery hoses (not coaxial) shall be retrofitted with coaxial hoses no later than January 1, 1994, or upon any vapor system modification, whichever is first. Any system installed after November 15, 1992 shall be equipped with coaxial hoses.~~

~~36.1.6 Remote vapor check valves in balance type systems installed prior to November 15, 1992, shall be retrofitted with check valves located in the nozzle no later than January 1, 1994, or upon any vapor system modification, whichever is first. Any system installed after November 15, 1992 shall be equipped with remote check valves located in the nozzle.~~

36.2 Definitions

Terms being defined in 36.2 of this regulation are used exclusively for 36.0 of this regulation. Other terms not defined herein shall have meanings defined in the Clean Air Act Amendments of 1990 (CAA), 7 DE Admin Code 1101, or 2.0 of this regulation.

"Assist System" means a system that creates a vacuum to assist the movement of vapors back into the storage tank.

"Balance System" means a system where pressure develops in the vehicle tank during fueling operations, and vacuum in the storage tank created when the fuel is removed, forces displaced vapors out the vehicle tank and back into the storage tank.

"Modified Facility" means a facility that: (1) excavates below a shear valve or tank pad in order to repair or replace its Stage II system or an underground storage tank; or (2) undergoes a major system modification consisting of the replacement, repair or upgrade of at

least 50% of a facility's Stage II vapor recovery system which includes dispensers, vapor return piping, and product piping.

"New Facility" means a facility that begins dispensing fuel for the first time.

"Pressure/Vacuum Valve" or "P/V Valve" means a relief valve installed on the vent stack of a tank system that is designed to open at specific pressure and vacuum settings to protect the system from excessive pressure or vacuum.

"Tank System" means a storage tank or a set of manifolded storage tanks containing gasoline.

"Ullage" means the empty volume of a gasoline storage tank system that contains liquid gasoline. Ullage is expressed as accumulated gallons of empty volume for all of the gasoline storage tanks in a manifolded system.

36.3 Standards for Facilities with Stage II Vapor Recovery Systems

36.3.1 The owner or operator of any gasoline dispensing facility ~~subject to the requirements of 36.0~~ identified in 36.1.4.3 of this regulation shall:

36.3.1.1 Design, install, operate, and maintain one of the Stage II Vapor Recovery Systems identified in ~~36.7~~ 36.10.1 of this regulation.

36.3.1.2 For systems with manifolded vapor lines, the liquid shall return into the lowest octane tank. For non-manifolded systems with separate vapor lines, the liquid shall return to the tank that has the same product as is dispensed at the nozzle where the liquid was introduced into the vapor lines.

36.3.1.3 ~~On and after May 4, 2003, install~~ Install and maintain a vapor shear valve that functions similarly to the product shear valve.

36.3.1.4 Conspicuously post "Operating Instructions" on both sides of each gasoline dispenser. Such instructions shall include:

36.3.1.4.1 A clear description of how to correctly dispense gasoline.

36.3.1.4.2 A warning that repeated attempts to continue dispensing gasoline, after the system has indicated that the vehicle fuel tank is full (by automatically shutting off), may result in spillage or recirculation of gasoline.

36.3.1.4.3 A toll-free telephone number to report problems experienced with the vapor recovery system to the Department.

36.3.2 At least one representative (an owner, facility manager, or designated employee) from each facility, or facilities under common ownership, shall attend a training program on the operation and maintenance requirements of the Stage II equipment that is selected for installation or installed on their facility premises. Acceptable forms of training include equipment manufacturer's seminars, classes or workshops, or any other training approved by the Department.

- 36.3.2.1 Verification, such as a certificate of attendance from the training program, shall be obtained by the attendee within three months of the installation of the Stage II system. The certificate shall display the name of the person who completed the training program.
- 36.3.2.2 The representative that completed the training program is then responsible for informing all facility employees about conducting routine maintenance pursuant to 36.3.3 of this regulation and about the operation and maintenance of the Stage II system. The representative shall maintain proof of training for all employees who will be conducting daily inspections. If such representative leaves that facility, or the company owning several facilities, another representative shall take and successfully complete the training within three months.
- 36.3.2.3 Training shall include, but not be limited to, the following subjects:
 - 36.3.2.3.1 Purposes and effects of the Stage II Vapor Control Program.
 - 36.3.2.3.2 Equipment operation and function specific to their facility's equipment.
 - 36.3.2.3.3 Maintenance schedules and requirements for the facility's equipment.
 - 36.3.2.3.4 Equipment warranties.
 - 36.3.2.3.5 Equipment manufacturer contracts (names, addresses, and phone numbers) for parts and service.
- 36.3.3 Each day personnel trained pursuant to 36.3.2 of this regulation shall perform routine maintenance inspections and record the inspection results.
 - 36.3.3.1 Such inspections shall consist of, but not limited to, inspection of the Stage II system for the following defects:
 - 36.3.3.1.1 A faceplate or face cone of a balance or assist system nozzle that does not make a good seal with a vehicle fill tube, or the accumulated damage to the faceplate or face cone is over 25% of its surface.
 - 36.3.3.1.2 A vapor assist system nozzle fitted with an efficiency compliance device that is damaged over 25% of its' surface.
 - 36.3.3.1.3 A nozzle bellows with a triangular tear measuring ½ inch or more to a side, a hole measuring ½ inch or more in diameter, or a slit or tear measuring one inch or more in length.
 - 36.3.3.1.4 A nozzle bellows or efficiency compliance device that is loosely attached to the nozzle body, not attached by a manufacturer approved method, or a vapor check valve frozen in the open position.
 - 36.3.3.1.5 A nozzle liquid shutoff mechanism that malfunctions in any manner, where the spring or latching knurl is damaged or missing.
 - 36.3.3.1.6 A nozzle with a vapor check valve that is defective, or a hose with a disconnected or damaged breakaway.

- 36.3.3.1.7 A vapor assist system nozzle spout that is damaged and the vapor collection holes are obstructed.
 - 36.3.3.1.8 A dispenser mounted vacuum pump that is not functioning.
 - 36.3.3.1.9 A vacuum assist system with a central vacuum unit or vapor processing unit that is inoperative.
 - 36.3.3.1.10 A hose retractor that does not fully retract.
 - 36.3.3.1.11 Any other component required by the Department for use in the system that is missing, disconnected, or malfunctioning.
- 36.3.3.2 The owner or operator shall post "Out of Order" signs and "Bag-out" the nozzle associated with any part of the defective vapor recovery system until said system has been repaired or replaced.

36.4 Standards for Facilities without Stage II Vapor Recovery Systems

36.4.1 The owner or operator of any gasoline dispensing facility identified in 36.1.4.1 of this regulation shall design, install, operate, and maintain one of the Stage I vapor recovery systems identified in 36.10.2 of this regulation.

36.4.2. Requirements for facilities not participating in the CPM trial.

36.4.2.1 The owner or operator of any gasoline dispensing facility identified in 36.1.4.1.1 of this regulation shall conduct a monthly inspection of the Stage I EVR systems to monitor the condition of all Stage I components. The inspection shall include at a minimum the following:

36.4.2.1.1 Check fill and Stage I swivel adapters to be sure they are tightly sealed.

36.4.2.1.2 Visually inspect Stage I dry breaks to be sure they are tightly sealed.

36.4.2.1.3 Check ATG caps to be sure they are tightly sealed and that the associated electrical grommets and vent extractor caps are in good working order.

36.4.2.1.4 Visually inspect the Riser and P/V valve and cap for damage visible from the ground level.

36.4.2.2 Any components found to be in need of repair shall be repaired as soon as possible but before the next scheduled inspection.

36.4.3 Requirements for facilities participating in the CPM trial.

36.4.3.1 The owner or operator of any gasoline dispensing facility identified in 36.1.4.1.2 of this regulation shall maintain the tank system at a vapor leak rate less than two times the rate allowed in accordance with California Air Resources Board (CARB) Vapor Recovery Test Procedure TP-201.3, "Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities", dated July 26, 2012, hereby incorporated by reference, and

demonstrated in accordance with monitoring requirements in 36.5 of this regulation. Equation 9-2 with N=1-6 from TP-201.3 shall be used for the determination.

36.4.3.2 The owner or operator of any gasoline dispensing facility identified in 36.1.4.1.2 of this regulation shall identify the percentage of time the tank system pressure is greater than 0.5 inches water column below the positive cracking pressure of the P/V valve, on a weekly basis, demonstrated in accordance with monitoring requirements in 36.5 of this regulation. The P/V valve positive cracking pressure shall be determined by the testing requirement in 36.6.2.1.3 of this regulation.

36.4.4 Enhanced conventional nozzles: Reserved.

36.4.5 Dispensing hose requirements: Reserved.

36.4.6 Any facility subject to 36.4 of this regulation shall meet the following posting and maintenance inspecting requirements.

36.4.6.1 Posting. Conspicuously post "Operating Instructions" on both sides of each gasoline dispenser. Such instructions shall include:

36.4.6.1.1 A clear description of how to correctly dispense gasoline.

36.4.6.1.2 A warning that repeated attempts to continue dispensing gasoline, after the system has indicated that the vehicle fuel tank is full (by automatically shutting off), may result in spillage.

36.4.6.1.3 A toll-free telephone number to report problems experienced with the gasoline dispensing system to the Department.

36.4.6.1.4 The owner or operator shall post "Out of Order" signs and "bag-out" the nozzle associated with any part of the defective gasoline dispensing system until said system has been repaired or replaced.

36.4.6.2 Each day personnel shall perform daily routine maintenance inspections and record the inspection results. Such inspections shall consist of, but not limited to, inspection of the dispensing systems for the following defects:

36.4.6.2.1 A nozzle liquid shutoff mechanism that malfunctions in any manner, where the spring or latching knob is damaged or missing.

36.4.6.2.2 A hose with a disconnected or damaged breakaway.

36.4.6.2.3 A hose retractor that does not fully retract.

36.4.6.2.4 Any other component required by the Department for use in the dispensing system that is missing, disconnected, or malfunctioning.

36.5 Monitoring Requirements and Corrective Action

36.5.1 The owner or operator of any gasoline dispensing facility identified in 36.1.4.1.2 of this regulation shall design, install, operate, and maintain a continuous pressure monitoring (CPM) system as identified in Exhibit 1 Section II, Exhibit 2 Section II, and Exhibit 3 Section II of CARB Executive Order VR-202-R, dated December 8, 2014, hereby incorporated by reference, to include a console, leak detection software, a vapor pressure sensor, and an automatic tank gauge, in accordance with the following. A vapor flow meter for each dispenser is not required. The owner or operator of any gasoline dispensing facility may petition the Department to allow the use of any other CPM system that has been certified by CARB as being equivalent to the systems identified in CARB Executive Order VR-202-R, and the Department may allow such system on a case-by-case basis.

36.5.1.1 The CPM system shall be operational a minimum of 95% of the time on a monthly basis and shall calculate and record the percentage of CPM operational time.

36.5.1.2 The CPM system shall be capable of assessing the vapor leak rate from the tank system at any working ullage pressure, both positive and negative.

36.5.2 The CPM system shall assess, on a weekly basis, the tank system vapor leak rate and pressure.

36.5.3 When the tank system vapor leak rate fails the requirement specified in 36.4.3.1 of this regulation, then:

36.5.3.1 The CPM system shall activate a warning alarm, and record the event. The owner or operator shall correct the excessive vapor leak rate within one week of the alarm, and reset the CPM system once the correction has been made.

36.5.3.2 Following a corrective action pursuant to 36.5.3.1 of this regulation, the CPM system shall recommence monitoring the tank system. If within one week the tank system again fails to meet the requirements of 36.4.3.1 of this regulation the CPM shall activate a second warning alarm and record the event. Following the second warning alarm, the owner or operator shall use a certified compliance testing company or a certified underground storage tank retrofit/installation company to correct the excessive vapor leak.

36.6 36.4 Testing Requirements

36.6.14.4 Any gasoline dispensing facility subject to the requirements of 36.3.4.4 of this regulation shall perform and pass the following tests in accordance with the test methods and procedures stated, or as otherwise approved by the Department and the Administrator of the EPA. Where any of the following test methods and procedures, in the opinion of the Department, conflict or are redundant with those specified in any CARB Executive Order adopted by reference in 36.107 of this regulation, the following test methods and procedures shall apply:

36.6.1.1.4.4.1 The following tests shall be performed and passed within 10 days of installation of the Stage II vapor recovery system:

36.6.1.1.1.4.4.1.1 A Pressure Decay/Leak Test conducted in accordance with Test Procedure TP-06-1 of the San Diego Protocol, Revision III dated 3-1-96. This test procedure is hereby incorporated by reference.

36.6.1.1.24.1.1.2 A Dynamic Backpressure and Liquid Blockage Test, conducted in accordance with the procedures in "Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Fueling Sites, PE/RRP300-97", Chapter 8. This test procedure is hereby incorporated by reference.

36.6.1.1.34.1.1.4 For assist systems, an Air to Liquid Volume Ratio Test conducted in accordance with the procedures in "Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Fueling Sites, PE/RRP300-97", Chapter 9. This test procedure is hereby incorporated by reference.

36.6.1.1.44.1.1.4 A Vapor Tie Test, conducted in accordance with Test Procedure TP-96-1 of the San Diego Protocol, Revision III dated 3-1-96. This test procedure is hereby incorporated by reference.

36.6.1.24.1.2 The following tests shall be performed and passed annually for each Stage II vapor recovery system according to the test procedures stated in 36.6.1.14.1.4 of this regulation:

36.6.1.2.14.1.2.1 A Pressure Decay/Leak Test, as specified in 36.6.1.1.1 of this regulation.

36.6.1.2.24.1.2.2 For Balance Systems, A Dynamic Backpressure and Liquid Blockage Test as specified in 36.6.1.1.2 of this regulation.

36.6.1.2.34.1.2.3 For Assist Systems, An Air to Liquid Volume Ratio Test as specified in 36.6.1.1.3 of this regulation.

36.6.1.34.1.3 Any additional testing or ~~testings~~ required by the Department or the manufacturer shall be carried out according to the schedule stated in any permit issued pursuant to 7 DE Admin Code 1102.

36.6.2 Any gasoline dispensing facility subject to the requirements of 36.4 of this regulation shall perform and pass the following tests in accordance with the test methods and procedures stated, or as otherwise approved by the Department and EPA.

36.6.2.1 The following tests shall be performed and passed within 10 days of installation of the Stage II EVR system:

36.6.2.1.1 A Pressure Decay/Leak Test, conducted in accordance with Test Procedure TP-96-1 of the San Diego Protocol, Revision III dated 3-1-96. This test procedure is hereby incorporated by reference.

36.6.2.1.2 A Vapor Tie Test, conducted in accordance with Test Procedure TP-96-1 of the San Diego Protocol, Revision III dated 3-1-96. This test procedure is hereby incorporated by reference.

36.6.2.1.3 A TV Valve Leak Rate and Cracking Pressure Test, conducted in accordance with CARB Test Procedure TP-201.1E dated October 8, 2003. This test procedure is hereby incorporated by reference.

36.6.2.1.4 For facilities subject to 36.4.3, an operability test of the CPM system in accordance with Exhibit 9 or Exhibit 10, as applicable, of CARB Executive Order VR-202-R, dated December 8, 2014, hereby incorporated by reference.

36.6.2.2 The CPM system operability test, as specified in 36.6.2.1.4 of this regulation, shall be performed and passed every three years after the CPM system is installed.

36.6.2.3 Owners and Operators subject to 36.4.2 shall conduct an annual pressure decay test (without any corrective action taken before or during the test on the day of the test) and a P/V valve test, as specified in 36.6.2.1.1 and 36.6.2.1.3 of this regulation, respectively. If the annual test is failed (meaning corrective action was needed on the day of the test), quarterly testing shall be required, and annual testing shall resume upon the passing of four consecutive quarterly tests.

36.6.34.2 The Department may require the performance of any of the tests identified in 36.6.14.4 or 36.6.2 of this regulation at any time at the owner's expense **when the Department determines that the performance of such tests are necessary to ensure the proper operation of the facility or emission control equipment**.

36.6.44.3 Written notification shall be submitted to the Department not less than 10 working days prior to the performance of any compliance test, unless approval by the Department is granted to the contrary.

36.6.54.4 The owner or operator or both and test contractor shall report all test failures to the Department within 24 hours of the failure.

36.6.64.5 The owner or operator shall submit the following to the Department within 30 days of the test date:

36.6.14.5.1 the actual test date; and

36.6.24.5.2 the installing or testing companies' company's name or names, address or addresses, and phone number or numbers; and

36.6.34.5.3 if any corrective action was performed pursuant to 36.8.4.26.4.2 of this regulation then submit all information specified in 36.8.46.4 of this regulation.

36.75 Recordkeeping and Reporting

36.7.15.4 The owner or operator of a gasoline dispensing facility subject to the requirements of 36.0 of this regulation shall keep on the facility premises and in a form acceptable to the Department, all of the following information. This information shall be retained for at least three years from the date of record and shall be made immediately available to the Department upon request:

36.7.1.15.4.1 Permits and Applications. Copies of the Stage I and Stage II System permit applications and the current Construction/Operation Permits shall be permanently maintained.

36.7.1.25.4.2 Installation and Testing Results. The test results shall be dated, and shall note the installing and test companies' names, addresses, and phone numbers.

These records shall be kept on file until they are replaced with new test results verifying proper functioning of the Stage I and Stage II systems, as applicable.

36.7.1.35-1.3 Maintenance Records. Any maintenance conducted on any part of the Stage I or Stage II vapor recovery system shall be logged on a maintenance record. This maintenance record shall include a general part description, the date repaired or replaced, the replacement part manufacturer's information, and a description of the problem and solution.

36.7.1.45-1.4 Inspection Records. A file shall be maintained of all daily and monthly inspection reports, as applicable, including records of daily self-inspections, and any third party inspection records.

36.7.1.5 The CPM system shall generate a daily report which includes the following:

36.7.1.5.1 CPM system operational time as a percentage;

36.7.1.5.2 Percentage of time the tank system pressure is above atmospheric pressure;

36.7.1.5.3 Percentage of time the tank system pressure is at or above 0.5 inches water column below the positive cracking pressure of the P/V valve.

36.7.1.6 The CPM system shall generate a monthly report which includes the following:

36.7.1.6.1 CPM system operational time as a percentage;

36.7.1.6.2 Percentage of time the tank system pressure is above atmospheric pressure;

36.7.1.6.3 Percentage of time the tank system pressure is at or above 0.5 inches water column below the positive cracking pressure of the P/V valve; and

36.7.1.6.4 Warnings, including the date and time of each warning.

36.7.1.75-1.5 Compliance Records. A file shall be maintained of all compliance records. This record shall include:

36.7.1.7.15-1.5.1 Any warning letters and notices of violations issued by the Department to the facility, the facility's responses and actions to the Department's warning or notice of violation, the facility's report of compliance to the Department after the facility's actions, and the Department's approval of compliance.

36.7.1.7.2 Daily and monthly CPM reports shall be available for printing and electronic download at the facility, and be made available to the Department upon request. Daily reports shall be available for the previous 12 months. Monthly reports shall be available for the previous 36 months.

36.7.1.7.3 The CPM system shall store the electronic records of the daily and monthly reports, such that the records are maintained despite loss of power to the CPM system.

36.7.1.7.45-1.5.4 Proof of attendance and completion of a training program for each person trained in accordance with 36.3.2.2 of this regulation. This does not

apply to the records of an employee who is no longer in service for at least one year.

36.7.25-2 Any gasoline dispensing facility exempted from the requirements of 36.0 of this regulation pursuant to 36.1.1.1 of this regulation shall maintain records of monthly throughput, and shall furnish these records to the Department upon request. These records shall be maintained on file for a minimum of three years from the date of record.

36.7.35-3 The owner or operator, or both, of any facility containing sources subject to 36.0 of this regulation shall comply with the requirements of 5.0 of this regulation.

36.86 Compliance Testing Company Requirements

36.8.16-4 Any owner or operator, or both, of any company that performs ~~Stage-II~~ compliance testing pursuant to ~~33.6.1~~ or ~~33.6.2~~ of this regulation within the State of Delaware shall submit all of the following information to the Department, prior to performing any ~~Stage-II~~ compliance testing within the State of Delaware:

36.8.1.16-4-1 The name and business mailing address of the ~~Stage-II~~ compliance testing company owner or operator;

36.8.1.26-4-2 The address and telephone number of the facility or facilities from which the daily compliance testing activities of the compliance testing company originate;

36.8.1.36-4-3 A written description of the employee training systems in place at the compliance testing company to ensure required compliance tests are performed in accordance with applicable protocols and procedures.

36.8.1.46-4-4 Certification by an individual who is a responsible and trained representative of the compliance testing company containing the following language verbatim:

36.8.1.4.16-4-4-1 I certify that I personally examined and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment; and

36.8.1.4.26-4-4-2 Employee training systems are in place at the company to ensure ~~Stage-II~~ compliance tests are performed in accordance with all applicable protocols and procedures; and

36.8.1.4.36-4-4-3 I am fully authorized to make this attestation on behalf of this ~~Stage-II~~ Compliance Testing Company.

36.8.26-2 Any company subject to the requirements of 36.86 of this regulation shall notify the Department in writing of any change to any information submitted to the Department within 14 days of the effective date of such change.

36.8.36-3 No person subject to the requirements of 36.86 of this regulation shall perform any ~~Stage-II~~ compliance test unless said person has first been trained in accordance to applicable compliance test protocols and procedures.

36.8.46.4 Any person subject to 36.86 of this regulation shall certify to the owner or operator of the gasoline dispensing facility that each compliance test performed to meet the requirements of 36.0, 36.3 and 36.4 of this regulation was performed in accordance with 36.64 of this regulation. Certification shall include:

36.8.4.16.4.1 The date each compliance test was first performed and the test results; and

36.8.4.26.4.2 An itemized list of all corrective action performed ~~on the Stage II system~~. This list shall include, but not be limited to, component re-installation, tightening, repair or replacement, as necessary, for the system to pass the applicable test or tests; and

36.8.4.36.4.3 The date each compliance test was performed and passed; and

36.8.4.46.4.4 Certification by a responsible and trained representative or representatives of the compliance testing company containing the following language verbatim:

36.8.4.4.16.4.4.4 I certify that I personally examined and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment; and

36.8.4.4.26.4.4.2 I am fully authorized to make this attestation on behalf of this Stage II Compliance Testing Company.

36.9 Stage II Decommissioning Procedures

36.9.1 The owner or operator of a gasoline dispensing facility shall decommission the Stage II vapor recovery system in accordance with all of the procedures specified in Chapter 14, except Section 14.6.14, of the Petroleum Equipment Institute's (PEI) "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites", PEI/RP300-09, which is hereby incorporated by reference.

36.9.2 On or after the effective date of this regulation, any site that has decommissioned a Stage II Vapor Recovery System shall cap the vapor return line at the tank top if accessible at the time of decommissioning, per PEI RP300-09. If not accessible at the time of decommissioning, the vapor return line shall be capped when a replacement or repair of the underground storage tank system or associated piping/components involves breaking concrete on top of the tank where the vapor return line terminates or when a pressure decay test indicates a problem with the vapor return line. As part of the decommissioning process additional UST system testing may be required such as performing hydrostatic testing of suction and line fill lines, testing of product lines, and ensuring non-vapor recovery nozzles have a flow rate of less than 10 GPM pursuant to Part B, Section 1.28 of the Delaware Regulations Governing Underground Storage Tanks, governing repair, upgrade, and retrofit requirements.

36.9.3 Decommissioning procedures shall be performed only by Stage II vapor recovery system installers certified in the State of Delaware.

36.107 Approved Stage II Vapor-Recovery Systems

The following California Air Resources Board (CARB) executive orders are hereby adopted by reference.

36.10.1 Stage II Vapor Recovery Systems

Number & Date	Description
G-70-7-AD (03/22/93)	Certification of the Hasstech Model VCP-2 and VCP 2A Phase II Vapor Recovery System.
G-70-14-AA (02/08/83)	Recertification of Red Jacket Aspirator Assist Phase II Vapor Recovery System.
G-70-17-AD (05/06/93)	Modification of Certification of the Emco Wheaton Balance Phase II Vapor Recovery System.
G-70-18-C (08/28/79)	Modification of Certification of the Shell Model 75B1 and 75B1-R3 Service Station Phase II Vapor Recovery System.
G-70-23-AC (04/29/96)	Recertification of the Exxon Balance Phase II Vapor Recovery System.
G-70-25-AA (02/08/83)	Recertification of the Atlantic Richfield Balance Phase II Vapor Recovery System.
G-70-33-AB (03/09/84)	Certification of the Modified Hirt VCS-200 Vacuum Assist Phase II Vapor Recovery System.
G-70-36-AD (09/18/92)	Modification of Certification of the OPW Balance Phase II Vapor Recovery System.
G-70-37-B (01/22/80)	Modification of the Certification of the Chevron Balance Phase II Vapor Recovery System with OPW nozzles for Service.
G-70-38-AB (12/19/90)	Recertification of the Texaco Balance Phase II Vapor Recovery System.
G-70-48-AA (02/08/83)	Recertification of the Mobil Oil Balance Phase II Vapor Recovery System.
G-70-49-AA (02/08/83)	Recertification of the Union Balance Phase II Vapor Recovery System.
G-70-52-AM (10/04/91)	Certification of Components for Red Jacket, Hirt and Balance Phase II Vapor Recovery System.
G-70-53-AA (02/08/83)	Recertification of the Chevron Balance Phase II Vapor Recovery System.

G-70-70-AC (06/23/92)	Certification of the Healy Phase II Vapor Recovery System of Service Stations.
G-70-77 (09/15/82)	Certification of the OPW Repair/Replacement Parts and Modification of the Certification of the OPW Balance Phase II Vapor Recovery System.
G-70-78 (05/20/83)	Certification of the E-Z Flo Nozzle Company Rebuilt Vapor Recovery Nozzles and Vapor Recovery Components.
G-70-101-B (11/15/85)	Certification of the E-Z Flo Model 3006 and 3007 Vapor Recovery Nozzles and Use of E-Z Flo Components with OPW Models 11 VC and 11 VE Vapor Recovery Nozzles.
G-70-107 (05/15/86)	Certification of Rainbow Petroleum Products Model RA3003, RA3005, RA3006 and RA3007 Vapor Recovery Nozzles and Vapor Recovery Components.
G-70-110 (01/20/87)	Certification of Stage I and II Vapor Recovery Systems for Methanol Fueling Facilities.
G-70-118-AB (03/31/95)	Certification of Amoco V-1 Vapor Recovery System.
G-70-125-AA (03/16/93)	Modification of the Certification of the Husky Model V Phase II Balance Vapor Recovery Nozzle.
G-70-127 (08/16/00)	Certification of the OPW Model 111-V Phase Vapor Recovery Nozzle.
G-70-134 (12/21/90)	Certification of the EZ Flo Rebuilt A-4000 Series and 11V-Series Vapor Recovery System.
G-70-139 (03/17/92)	Addition to the Certification of the Hirt Model VCS-200 Phase II Vapor Recovery System.
G-70-150-AE (07/12/00)	Modification of the Certification of the Gilbarco Vapor Vac Phase II Vapor Recovery System.
G-70-153-AD (04/03/00)	Modification to the Certification of the Dresser/Wayne WayneVac Phase II Vapor Recovery System.
G-70-154-AA (06/10/97)	Modification to the Certification of the Tokheim MaxVac Phase II Vapor Recovery System.
G-70-159-AB (07/17/95)	Modification of the Certification of the Saber Nozzle for Use with the Gilbarco VaporVac Phase II Vapor Recovery System.
G-70-163-AA (09/04/96)	Certification of the OPW VaporEZ Phase II Vapor Recovery System.

G-70-164-AA (12/10/96)	Modification to the Certification of the Hasstech VCP-3A Vacuum Assist Phase II Vapor Recovery System.
G-70-165 (04/20/95)	Healy Vacuum Assist Phase II Vapor Recovery System.
G-70-169-AA (08/11/97)	Modification to the Certification of the Franklin Electric INTELLIVAC Phase II Vapor Recovery System.
G-70-170 (02/22/96)	Certification of the EZ-flo Rebuilt 5005 and 5015 for use with the Balance Phase II Vapor Recovery System.
G-70-177-AA (06/22/00)	Certification of the VCS400-7 Vacuum Assist Phase II Vapor Recovery System.
G-70-179 (07/02/97)	Certification of the Catlow ICVN-V1 Vacuum Assist Phase II Vapor Recovery System
G-70-180 (04/17/97)	Order Revoking Certification of the Healy Phase II Vapor Recovery Systems for Gasoline Dispensing Systems
G-70-183 (03/04/96)	Certification of the Healy/Franklin Vacuum Assist Phase II Vapor Recovery System
G-70-186 (10/26/98)	Certification of the Healy Model 400 ORVR Vapor Recovery System.
G-70-188 (05/18/99)	Certification of the Catlow ICVN Vapor Recovery Nozzle System for use with the Gilbarco VaporVac Vapor Recovery System.
G-70-191 (08/08/99)	Healy/Franklin VP-1000 Vapor Pump Phase II Vapor Recovery System (Healy ORVR Phase I Vapor Recovery System).
G-70-196 (12/30/00)	Certification of the Saber Technologies, LLC SaberVac VR Phase II Vapor Recovery System.

36.10.2 Stage I Vapor Recovery Systems

<u>Number</u>	<u>Description</u>	<u>Date</u>
<u>VR-101-N</u>	<u>PHI-Tite Phase I Vapor Recovery System</u>	<u>June 8, 2013</u>
<u>VR-102-O</u>	<u>OPW Phase I Vapor Recovery System</u>	<u>October 3, 2014</u>
<u>VR-103-G</u>	<u>ELB/W Phase I Vapor Recovery System</u>	<u>June 3, 2013</u>

<u>VR-104-G</u>	<u>CNI Manufacturing Phase I Vapor Recovery System</u>	<u>June 8, 2013</u>
<u>VR-105-D</u>	<u>EMCO Wheaton Retail Phase I Vapor Recovery</u>	<u>August 27, 2014</u>
<u>VR-401-D</u>	<u>OPW Phase I EVR System for ASTs</u>	<u>May 12, 2014</u>
<u>VR-402-B</u>	<u>Morrison Brothers Phase I EVR System for ASTs</u>	<u>April 15, 2013</u>

HEARING OFFICER'S REPORT

TO: The Honorable David S. Small
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Senior Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Proposed Amendment to Section 36 "Stage II Vapor Recovery" of Regulation 1124 "Control of Volatile Organic Compound Emissions" of *Regulations Governing the Control of Air Pollution, 7 DE Admin. Code 1100 et seq.*

DATE: August 10, 2015

I. BACKGROUND AND PROCEDURAL HISTORY

On November 26, 2013, the Secretary of the Department of Natural Resources and Environmental Control ("Department") signed Start Action Notice ("SAN") 2013-31, which approved the Department's Division of Air Quality ("DAQ") request to commence the development of an amendment to the Department's *Regulations Governing the Control of Air Pollution, 7 DE Admin. Code 1100 et seq.* ("Air Quality Regulations").

The SAN's stated purpose was to amend Sections 26, 27, and 36 of Air Quality Regulation 1124, "Control of Volatile Organic Compound Emissions." in order to eliminate the current regulation's requirement that gas dispensing facilities ("GDFs")¹ use Stage II vapor recovery equipment on their pumps to control gasoline vapor emissions that otherwise would be released when re-fueling vehicles.

¹ Section 36 exempts small GDFs.

DAQ worked with a review committee of members from the public, and developed a proposed amendment of Section 36 of Air Quality Regulation 1124. The proposed amendment was published in the August 1, 2014 *Delaware Register of Regulations*, along with public notice of an August 2014 public hearing. At the public hearing, this proposed amendment was opposed by GDF owners and operators primarily because it would require GDFs to install continuous pressure monitoring (“CPM”) systems for their storage tanks. Based upon the public comments received at the public hearing, DAQ decided to revise the August 2014 proposed amendment.

On June 1, 2015, the Department had published in the *Delaware Register of Regulation*, a new proposed amendment to Section 36 of Air Quality Regulation 1124 (“Amendment”). In addition, the Department provided public notice of the withdrawal of prior proposed amendment published August 1, 2014. Finally, the Department published notice of a June 25, 2015 public hearing on the Amendment.

The June 25, 2015 public hearing was held before this presiding hearing officer at the Department’s offices in Dover and approximately ten members of the public attended. The public comment period for written comments remained open until July 10, 2015, and one comment was received during this period. I denied Alan Muller’s email request to keep the record open after the receipt of the transcript because I determined that the required fifteen day period following the public hearing was a sufficient extension of the time period for written comments. .

On July 30, 2015, DAQ provided me with the attached Technical Response Memorandum (“TRM”), which provides a technical response to the public comments and

recommends a non-substantive change to the Amendment. DAQ recommends that the Department adopt the Amendment, as revised by DAQ.

II. SUMMARY OF THE RECORD

The record on the Amendment consists of: 1) the verbatim transcript of the June 25, 2015 public hearing, 2) the documents marked as exhibits introduced at the June 25, 2015 public hearing, as summarized below, and 3) this Report and the documents identified herein, including the attached DAQ TRM.

At the public hearing, DAQ's Planning Branch Manager, Ron Amirikian, provided support for the Amendment. He explained that if gasoline vapors escaped from GDFs, then they could contribute significantly to ground-level ozone conditions, commonly called smog. He noted that Delaware currently does not meet the federal air quality standards for ground level ozone, which causes breathing difficulties by reducing the lung's ability to function, increasing respiratory conditions such as asthma or other respiratory conditions. He described in detail the toxic air pollutant chemicals in the gasoline vapors. He stated that one chemical in gasoline vapor, benzene, is a human carcinogen that increases the risk of developing cancer, such as leukemia. He said it also may harm the central nervous system, the respiratory tract, and the immune system. Another toxic air pollutant chemical in gasoline vapor that he identified is ethylbenzene, which he said may also cause cancer and may harm the kidney, liver, and fetal development. Finally, he stated that gasoline vapor also contains toluene and xylenes, which can harm the central nervous system.

Mr. Amirikian explained how the Department had regulated GDFs gasoline vapor emissions during the filling of storage tanks by requiring GDFs to install approved Stage

I vapor recovery equipment. He said the gasoline vapor emitted during the fueling of motor vehicles was regulated by requiring GDFs to install approved Stage II vapor recovery equipment on the pumps. He said that the use of both types of air pollution control equipment has significantly reduced the release of gasoline vapors from GDFs.

Mr. Amirikian described when in 1998 ORVR systems began to be installed in cars as part of a federal program requiring a phase-in ORVR installations by car manufacturers. He said that the ORVR systems control gasoline vapor emissions during refueling the same as the Stage II equipment.

He went on to describe the attempt to amend Section 36 in August 2014, and the opposition from some public comments that sought substantive changes. In response to the public comments he said that DAQ decided to withdraw the August 2014 proposed amendment and replace it with the Amendment.

He described the Amendment as allowing new GDFs the option to not install Stage II vapor recovery systems, and that existing GDFs undergoing modifications would be allowed the option to decommission their Stage II equipment. The Amendment would require these new or modified stations electing not to use Stage II equipment to instead to install enhanced Stage I vapor recovery systems, and to either 1) conduct enhanced inspections and pressure decay leak testing or, 2) participate in a 1-year trial usage of a California approved CPM systems to determine if CPM systems in Delaware are able to accurately identify system leaks, and the times when gasoline vapor emissions are being vented from the underground storage tanks' pressure/vacuum valves.

After the 1-year trial period of use of the trial CPM systems, he noted that DAQ intends to discuss with the review committee and determine a final path forward on the need for additional emission controls on gasoline stations without Stage II systems. This path forward will be heavily based on the results of the trial use of CPM systems in the Amendment.

Mr. Amirikian provided for the record the following documents to support adoption of the June 2015 proposed amendment as a final regulation:

DNREC Exhibit 1-Start-Action-Notice 2013-31 signed by the Department's Secretary on November 26, 2013;

DNREC Exhibit 2- Proposed amendment to Section 36 of 7 *DE Admin.Code 1124*, and the associated public notice, as published in the June 1, 2015 issue of the *Delaware Register of Regulations*;

DNREC Exhibit 3-Proof of publication in *The News Journal* of the May 17, 2015 legal notice of the June 2015 proposed amendment and the June 25, 2015 public hearing on it;

DNREC Exhibit 4 -Copy of the public notice of the public hearing, as displayed on Delaware's on-line Public Meeting Calendar;

DNREC Exhibit 5-DAQ's Regulatory Flexibility Act Compliance analysis for the proposed revision to Section 36 of 7 DE Admin. Code 1124;

DNREC Exhibit 6- Executive Orders of California's Air Resources Board ("CARB") on its regulation of GDFs' vapor recovery systems, which the June 2015 proposed amendment incorporates by reference in Section 36.10.2;

DNREC Exhibit 7-CARB Test Procedure TP-201.3, Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, dated July 26, 2012, which the June 2015 proposed amendment, which incorporates by reference in Section 36.4.3.1;

DNREC Exhibit 8-Exhibit 1, Section II, Exhibit 2, Section II, and Exhibit 3, Section II of CARB Executive Order VR-202-R, dated December 8, 2014, which the June 2015 proposed amendment, incorporates by reference in Section 36.5.1;

DNREC Exhibit 9- CARB Test Procedure TP-201.1E, P/V Valve Leak Rate and Cracking Pressure Test, dated October 8, 2003, that the June 2015 proposed amendment incorporates by reference in Section 36.6.2.1.3;

DNREC Exhibit 10-Exhibits 9 and 10 of CARB Executive Order VR-202-R, dated December 8, 2014, that the June 2015 proposed amendment incorporates by reference in Section 36.6.2.1.4; and

DNREC Exhibit 11-Chapter 14 of the Petroleum Equipment Institute document PEI/RP300-09 "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites," entitled "Decommissioning Stage II Vapor-Recovery Piping," that the June 2015 proposed amendment incorporates by reference in Section 36.9.

Following DAQ's presentation, I marked the following written public comments that the Department received:

Delaware Audubon Society ("DAS") Exhibit 1, which is a June 25, 2015 letter from Amy Roe, DAS' Conservation Chair. This letter opposed the June 2015 proposed regulation because it would end the requirement that GDFs must use approved Stage II equipment. As a result, air emissions of VOC would increase and Delaware was already designated by the Environmental Protection Agency as a non-attainment area for ground-level ozone. She also raised the issue that older vehicles likely may be in lower income neighborhoods, which means that lower income population would be adversely impacted by eliminating the requirement for Stage II equipment.

Franklin Fueling System Exhibit 1 is an email to DAQ from Rod Scott, Northeast Regional Manager commenting on the Amendment generally in support.

Green Delaware Exhibit 1 is a June 25, 2015 email to me from Alan Muller on behalf of Green Delaware that supports keeping Stage II vapor recovery equipment and he wants to incorporate his comments on the August 2014 proposed amendment. His comment stated his preference that Stage II equipment still be required for all GDFs

because many users of GDFs do not have ORVR systems, such as motorcycles, gas cans, off road vehicles and boats. His comments stated that California had kept the requirement for Stage II equipment as part of its regulations of GDFs.

The first public speaker was Ellen Valentino, who appeared on behalf of Mid-Atlantic Petroleum Dealers Association (“MAPDA”). She later submitted comments dated July 6, 2015 that I mark as MAPDA Exhibit 1. She thanked the Department for working with the regulated industry on establishing a pilot program for vapor monitoring systems. Finally, she mentioned that the pilot program’s results will have to be evaluated after 12 or 18 months to determine the effectiveness of the CPM systems.

Her written comments raised issues with several subsections of the Amendment that questioned whether the appropriate CARB approved testing procedures were selected to use in Delaware. She also opposed on the discretionary and open-ended Department’s authority to order additional testing of GDFs, which would impose costs on a GDF.

Mark Baker spoke next and mentioned that the Amendment’s development has been a long and difficult process and that everyone agrees that the end result is not perfect. He described the Amendment as a temporary, transitory regulation that will enable GDFs to move forward and away from use of Stage II equipment. He supports the Amendment. He indicated that his company had offered one of its GDFs for the pilot program, but that he has not heard anything on his offer. He also supports the MAPDA comments. He indicated that he just noticed Section 36.6.3’s provision that causes him to be concerned that its language gives the Department too much discretion to order testing. He would like qualifier language included based upon some triggering event or reason, and not just because someone wants a test done. I asked him for the cost of the testing,

and he answered that testing cost ranged from several hundred dollars to a thousand dollars.

Ken Barnum spoke as a representative of Veeder-Root, which he described as a solutions provider. He indicated that the Amendment would allow electronic continuous pressure monitoring systems, which his company provides. He said his company would have its equipment ready for installation by September 12, 2015. He also foresees the need for further revisions, as necessary, when the results of the implementation of the Amendment are known after the trial program.

I indicated that the time period for written public comments would close on July 10, 2015. I denied Mr. Muller's email request for an extension of time. DAQ requested publication of the final regulation as soon as possible and I determined that the fifteen day extension as required by law was a sufficient extension of time after the hearing.

On July 30, 2015, DAQ provided the attached TRM, which responds to the technical issues raised in the public comments. DAQ provides an explanation of its selection of CARB approved testing procedures in response to MAPDA's comments. In addition, DAQ addresses the DAS and Green Delaware comments over the removal of Stage II equipment. DAQ recommends adoption of the Amendment, as revised by DAQ's request for minor, non-substantive changes for typographic errors and changes that clarify when the Department could direct further testing of GDF's storage tanks.

III. RECOMMENDED FINDINGS OF FACT AND CONCLUSIONS

I find that the Amendment should be adopted because it will provide a good path forward to improved control over GDFs' gasoline vapor emissions. I find that the Amendment is based upon the sound foundation that GDFs emit gasoline vapors during

the re-fueling of vehicles and during the filling of storage tanks. I find that DAQ provided compelling support that gasoline vapors contain the air toxics and the pollutant Volatile Organic Compound (“VOC”), which were shown in the record to be harmful to the environment and public health. I find that the regulation of VOC emissions from GDFs is within the Department’s statutory purpose in *7 Del. C. Chap. 6001* to reduce air pollution in order to improve the environment and public health.

The Amendment would change the current Section 36, which requires all GDFs to control gasoline vapors released during re-fueling by requiring the use of approved Stage II vapor recovery systems. The Amendment would allow some GDFs, namely, new GDFs and GDFs that are modified,² to not use Stage II equipment. I find that one reason for the Amendment’s option for GDFs is based upon the widespread use of ORVR systems, which are able to control the gasoline vapor emissions during re-fueling. I find reasonable DAQ’s estimate that approximately 90% of Delaware cars by 2016 will have ORVR systems.³ I agree with DAQ’s assessment that ORVR systems provide the same level control of gasoline vapor emissions as does Stage II equipment. Thus, I find that it is appropriate to revise Section 36 to eliminate the requirement for Stage II systems, and that all new GDFs and modified GDFs should have the option to not install Stage II equipment.

For those GDFs electing not to use Stage II equipment, the Amendment would require enhanced Stage I equipment be installed in order to improve the control of gasoline vapor emissions from storage tanks. Moreover, the Amendment would require these non-Stage II equipped GDFs to elect to either be subject to the Amendment’s

² The Amendment defines the modification necessary to be considered a modified GDF.

³ ORVR systems began to be installed in cars in 1998 as a result of federal regulation.

testing procedures for the storage tanks, or participate in a one year trial demonstration of CARB approved CPM system. I find that the Amendment's changes are reasonable and well-supported and should be adopted.

The public comments from the DAS and Green Delaware that opposed eliminating the Stage II requirement were addressed in DAQ's TRM. I find that DAQ's response to these public comments sound and reasonable based upon the widespread use of ORVR systems in Delaware. As to the comments that seek an immediate requirement for GDFs to install CPM systems, I find that this change should be rejected because I find it reasonable that the Department should have the information from the trial use of CPM systems before taking further regulatory action.

The public comments from MAPDA and other GDF owners and operators dispute the testing procedures to be applied, but DAQ's TRM provides an explanation for its selected procedures and I find that the Amendment should not be changed, except to provide some clarification on when the Department may order testing. .

I find the requirement on non-Stage II equipped GDFs to use approved enhanced Stage I equipment and to follow either CARB test procedures or CARB approved CPM systems is reasonable. CARB is recognized for its leadership in air quality regulation by the Petroleum Equipment Institute. DAQ's experts have independently reviewed the CARB decisions and their extensive scientific basis, which has been included in this record. Consequently, I find that the reliance on CARB's regulatory proceedings is justified and reasonable to support the Amendment.

A more detailed review of changes from the current regulation in the Amendment finds that the title of Section 36 will change from "Stage II Vapor Recovery" to "Vapor

Emission Control at Gasoline Dispensing Facilities.” I find this change reasonable to provide a better description of the new regulation, which will regulate GDFs gasoline vapor emissions even if a GDF has no Stage II equipment as allowed by the Amendment. Section 36.1.1 provides certain clean up and clarifying changes that I find are needed. Section 36.1.4 would be changed for a compliance schedule, which would regulate after the effective date of the regulation any new GDF and an existing GDF that decommissions its Stage II equipment vapor recovery system. These two types of GDFs would be required to elect to either install a CARB approved vapor recovery systems set forth in Section 36.10, or participate in a trial period of at least one year using CPM system, as provided in Section 36.4.3. Any GDF with Stage II equipment would continue to be subject to the current regulation in Section 36.3. I find the proposed option procedures and the reliance on the approved CARB equipment and testing procedures reasonable because it allows GDFs flexibility without mandating CPM. More importantly, the trial procedure allows Delaware specific conditions to be evaluated to determine after a trial period whether the regulation should be revised in the future.

In sum, I find that DAQ’s experts provided sound and well-supported technical and scientific basis for the Amendment. They independently determined that the CARB approved Stage I equipment and testing procedures should be used in Delaware for new and modified GDFs that elect not to use Stage II equipment. The Amendment also allows those GDFs the option of participating in a trial demonstration of CPM or submit to more rigorous testing of their storage tanks. The Department will welcome the participation in the CPM system trial demonstration, which I find should provide useful information on the next change to Section 36. This trial use of CPM systems will

develop Delaware specific data that may warrant changes to the regulation in the future. I find this to be a reasonable approach to the introduction of the CPM for GDFs.

I find that the record, as established above, supports adoption of the Amendment as a final regulation with the minor changes DAQ seeks. The DAQ proposed minor changes I find are not substantial change to Amendment sufficient to warrant re-publication and another public hearing. The one change would provide some assurance to GDFs that a Department directed testing would not be arbitrary, particularly given the considerable testing cost involved, which does not include the loss of productive use of the GDF while the testing is being done. I find that clarifying language should be included to allay this concern with arbitrary treatment by the Department.

Accordingly, I recommend that the Department adopt the Amendment, as revised by the minor changes identified in Appendix "A." I recommend that the Secretary adopt the following reasons and conclusions:

1. The Department has the statutory authority in *7 Del. C. 6010* to promulgate regulations to administer its statutory duties;
2. The Department is empowered in *7 Del. C. Chap. 60* to regulate air emissions of air toxics and the pollutant VOC in order to protect the environment and public health from harm;
3. GDFs emit air toxics and the pollutant VOC during the fueling of motor vehicles and the filling of storage tanks;
4. The Department has determined that the emission of air toxics and VOC from GDFs poses a risk of harm to the environment and public health that should be

- regulated by a regulation requiring the option to install enhanced approved Stage I equipment to reduce GDFs' gasoline vapor emissions;
5. The proposed amendment to Section 36 of Regulation should be adopted as a reasonable and well-supported regulatory method to improve the air quality in Delaware by reducing GDFs' emissions of air toxics and VOC;
 6. The Department conducted a proceeding consistent with the Department procedures, laws and regulations;
 7. The Department provided public notice of the Amendment and the public hearing consistent with the law and Department regulations, and fully considered the public comments in the record;
 8. The Department's proposed amendment, as published in the June 1, 2015 Delaware Register of Regulations and as revised for a non-substantial change in Appendix "A" hereto, is adequately supported by the record, is reasonable and not arbitrary or capricious exercise of the Department's authority to promulgate regulations, and is consistent with the applicable laws and regulations; and
 9. The Department shall submit this Order approving as final the proposed amendment to Section 36 of Air Quality Regulation 1124, *7 DE Admin. Code 1124* to the *Delaware Register of Regulations* for publication in the next available issue and shall go into effect ten days after such publication, and shall provide such other notice as the law and regulation require and the Department determines is appropriate. .



Robert P. Haynes, Esquire
Senior Hearing Officer

Appendix A
Recommended Final Regulation (see appendix A of Order)

Appendix B
Division Technical Response Memorandum to Public Comments



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR QUALITY
655 SOUTH BAY ROAD, SUITE 5N
DOVER, DELAWARE 19901

AIR QUALITY PLANNING
SECTION

Telephone: (302) 739 - 9402
Fax No.: (302) 739 - 3106

MEMORANDUM

To: Mr. Robert Haynes,

From: Ron Amirikian *RAA*
David Fees

Subject: Response to Comments – June 25, 2015 Public Hearing

On June 25, 2015 you presided over a public hearing on proposed revisions to Section 36.0 of 7 DE Admin. Code 1124. The Division of Air Quality (DAQ) received public comments from three persons on the proposed revisions. Below is a summary of each comment received, and a response for your consideration.

1. Comments in a June 25, 2015 letter from Amy Roe, Delaware Audubon Society, to Robert Haynes.

DAQ understands the Delaware Audubon Society letter to recommend that emissions from gasoline stations be controlled so that wildlife, bird and human exposure to volatile and unhealthy VOCs, benzene, and other hazardous chemicals will be minimized, and that the local air quality in all communities will not be adversely harmed. To this end, the Delaware Audubon Society has recommended that a robust monitoring program be included within the regulations to provide assurances to the public that dangerous vapors are not present in the ambient air at or near gas stations, and that either Stage II vapor recovery systems continue to be required or a mechanism be included in the regulation to restore Stage II vapor recovery if emissions increase or if air quality erodes. DAQ agrees in concept with Delaware Audubon Society, and has expressed this in its goal that all emission points at each gasoline station in the State to be "well controlled."

The purpose of this regulatory revision is to demonstrate, through a 1-year trial period, whether or not the continuous pressure monitoring systems currently in use in California can identify vapor leaks and venting from tank systems at gasoline stations in Delaware operating without Stage II vapor recovery systems. If this system is demonstrated to work, and to be necessary, the DAQ believes in the future it could be required on all stations to ensure emissions from the gasoline stations tanks, piping and fittings are at all times well controlled and protective of air quality. After completion

Delaware's good nature depends on you!

of the 1-year trial DNREC plans to revise this regulation again, and this future revision will be based on the data obtained from the trial plus any other data available at the time of the future revision.

Regarding the continued use of Stage II, by 2016, 90% of gasoline sold in Delaware will be dispensed to vehicles equipped with on-board refueling vapor recovery (ORVR) technology. ORVR is a federal requirement, and ORVR technology can actually cause an increase in emissions at gas stations equipped with Stage II. This increase is known as incompatibility excess emissions, and occurs because gasoline vapors in the vehicle's fuel tank are routed through the ORVR canister, while the Stage II system forces fresh air back to the station's tanks. The fresh air that is introduced in the stations tanks promotes vapor growth, tank pressure, vapor leaks and venting from the tanks. DAQ has estimated that by the end of 2018 the incompatibility excess emissions could be greater than the remaining benefit of refueling non-ORVR vehicles at a Stage II station. Despite this estimate, Stage II systems are still at this time beneficial in Delaware and the proposed regulation does not provide for the general decommissioning of Stage II systems. During the trial period only new and modified stations will qualify to operate without Stage II, and then only after (1) installing a CARB certified Stage I Enhanced Vapor Recovery system, and (2) either installing and operating a CPM system, or performing enhanced inspection and testing. Only a small fraction of gas stations in Delaware are expected to qualify for eliminating Stage II during the trial period. After completion of the 1-year trial DNREC plans to revise this regulation again, and this future revision will address the future of Stage II vapor recovery systems in Delaware. DAQ will form a stakeholder review committee to aid it in development of this future revision.

Based on this discussion the DAQ does not recommend any changes regarding ambient monitoring or the retention of Stage II requirements be made to the proposed regulation at this time.

2. Comments in a June 25, 2015 email from Allen Muller, Green Delaware, to Robert Haynes.

DAQ understands Green Delaware's comments made to the hearing officer, Bob Haynes, by e-mail on June 25, 2015, and by reference to a previous e-mail sent on October 6, 2014 to recommend that either Stage II vapor recovery systems continue to be required and be made compatible with the ORVR technology, or, as a backup position, to require vapor control equipment such as the use of continuous pressure monitoring systems proposed in the trial period of the current regulatory revision. DAQ agrees in concept with Green Delaware, and has expressed this in its goal that all emission points at each gasoline station in the State to be "well controlled."

During the trial period only new and modified stations will qualify to operate without Stage II, and then only after (1) installing a CARB certified Stage I Enhanced Vapor

Recovery system, and (2) either installing and operating a CPM system, or performing enhanced inspection and testing. Only a small fraction of gas stations in Delaware are expected to qualify for eliminating Stage II during the trial period. After completion of the 1-year trial DNREC plans to revise this regulation again, and this future revision will address the future of Stage II vapor recovery systems in Delaware. DAQ will form a stakeholder review committee to aid it in development of this future revision.

Based on this discussion the DAQ does not recommend any changes regarding the retention of Stage II requirements be made to the proposed regulation at this time.

3. Comments received in a July 07, 2015 email from Ellen Valentino to Ali Mirzakhilili and David Small.

- 36.1.4 – We propose that part of the trial should be to determine if CPM systems are even necessary with a non-stage II fuel system.

DAQ does not agree. DAQ believes this comment describes a determination that is not germane to, and that cannot be a part of, the trial period. A determination of whether or not CPM systems are necessary with a non-stage II fuel system can only be made after the trial has ended. The purpose of the 1-year trial is to demonstrate whether or not CPM systems will work in Delaware (i.e., whether or not a CPM system is able to accurately identify system leaks and times when emissions are being vented from the pressure/vacuum valve). After completion of the 1-year trial DNREC plans to revise this regulation again, and this future revision will be based on the data obtained from the trial plus any other data available at the time of the future revision. A main goal of this future revision will be to ensure that stations do not leak gasoline vapors into the atmosphere, and DAQ agrees that the future revision may or may not require CPM systems. DAQ will form a stakeholder review committee to aid it in development of this future revision.

- 36.6.2.1 – We recollect that it was agreed upon in our last meeting that the pressure decay test would be conducted in accordance with CARB vapor recovery test procedure TP-201.3 (Determination of 2 Inch WC Static Pressure..); not Test Procedure TP-96-1 of the San Diego Protocol, Revision III dated 3-1-96 (10 Inch WC test). It was discussed that the TP-201.3 test is a more realistic and representative test since it is performed with all system components in place. The TP 96-1 test must be performed with the P/V Vent Cap removed and plug in it's place.

DAQ does not agree. 36.6.2.1 requires 1-time tests that are to be performed when a new or modified station with a Stage I EVR system is first put into operation. One goal of these tests is to ensure that the station does not leak, and the 10 Inch WC test is the best test to do this. Past DNREC experience indicates that leaks that are not detected with a 2" WC test are often detected with the 10 Inch WC test. After this initial test, stations that install and operate a CPM system will not be subjected to annual pressure

decay testing. The rationale behind this is that because 36.5.1 and 36.5.2 require the CPM system to continuously detect any leaks (the purpose of the trial is to determine if they can do this in Delaware), and if leaks are detected 36.5.3 requires the leaks to be located and repaired. Under the proposal all existing stations remain subject to an annual 10 Inch WC test, and new or modified stations that do not install and operate a CPM system will be subject to annual 10 Inch WC test pursuant to 36.6.2.3.

- 36.6.2.3 – Does not specify which test procedure should be used for the annual pressure decay test. Per the above comment, TP-203.1 would be the industry recommendation.

DAQ does not agree. 36.6.2.3 states, “*Owners and Operators subject to 36.4.2 shall conduct an annual pressure decay test (without any corrective action taken before or during the test on the day of the test) and a P/V valve test, as specified in 36.6.2.1.1 and 36.6.2.1.3 of this regulation, respectively. If the annual test is failed (meaning corrective action was needed on the day of the test), quarterly testing shall be required, and annual testing shall resume upon the passing of four consecutive quarterly tests.*” The applicable test is specified in reference 36.6.2.1.1 which states, “*A Pressure Decay/Leak Test, conducted in accordance with Test Procedure TP-96-1 of the San Diego Protocol, Revision III dated 3-1-96. This test procedure is hereby incorporated by reference.*”

- 36.6.3 – “The Department may require the performance of any of the tests identified in 36.6.1 or 36.6.2 of this regulation at any time at the owner’s expense” – we believe there needs to be some qualifier or qualifying event tied to this statement; or the statement should be removed from the regulation. It is too open ended.

36.6.3 states, “*The Department may require the performance of any of the tests identified in 36.6.1 or 36.6.2 of this regulation at any time at the owner’s expense.*” This requirement was not proposed to be changed from the existing language, however, under the proposed language there are two new tests that become covered under this provision -- the P/V Valve Leak Rate and Cracking Pressure Test (36.6.2.1.3) and the CPM system operability test (36.6.2.1.4). Tests previously covered by this requirement are a pressure decay/leak test, dynamic backpressure and liquid blockage test, air to liquid volume ratio test, and vapor tie test. The purpose of this provision is to supplement the testing schedules provided in 36.6.1 and 36.6.2 with additional testing that may be necessary to ensure proper operation of the facility or emission control equipment. This provision has not been identified as a problem in the past, but the Department agrees a qualifier or qualifying event could improve clarity. DAQ proposes the following underlined language be added to 36.6.3:

36.6.3 states, “The Department may require the performance of any of the tests identified in 36.6.1.4.1 or 36.6.2 of this regulation at any time at the owner’s expense **when the Department determines that the performance of such tests are**

necessary to ensure the proper operation of the facility or emission control equipment].”

- 36.9.2 – “As part of the decommissioning process additional UST system testing may be required such as performing hydrostatic testing of sumps and line tightness testing of product lines and ensuring non-vapor recovery nozzles have a flow rate of less than 10 GPM...” – again, this is too open ended for the Department to require any test that they feel fit. Decommissioning of Stage II systems should not affect the integrity of containment sumps or product piping; as such, they should not be included as potential tests associated with decommissioning. PEI’s panel of industry experts put a procedure in place which includes pertinent tests. As such, testing should be performed per PEI RP300-09, and there should not be any additional requirements or testing that deviate from this procedure.

Tanks Management Section does not agree. This requirement is not being changed due to the many different configurations of piping that can be found at an UST facility, and that not all UST systems have containment sumps at both the dispenser and the tank top. Because of this variability, TMS needs the flexibility to require different types of UST system integrity testing depending on the scope of work and details of each decommissioning project.