State of Rhode Island
Department of Environmental Management
Office of Air Resources

Notice of Public Hearing and Comment Period

Concerning adoption of proposed amendments to Air Pollution Control Regulation No. 11, "Petroleum Liquids Marketing and Storage" and adoption of the "Rhode Island Stage II Vapor Control Program Discontinuation State Implementation Plan Revision"

Notice is hereby given that a public hearing regarding adoption of proposed amendments to Air Pollution Control Regulation No. 11, "Petroleum Liquids Marketing and Storage," and adoption of the "Rhode Island Stage II Vapor Control Program Discontinuation State Implementation Plan Revision" (SIP Revision) will be held in Room 300 of the Department of Environmental Management, at 235 Promenade Street, Providence, Rhode Island on Wednesday, October 30, 2013 at 10:00 AM, at which time interested parties will be heard.

The proposed amendments to Regulation No. 11 would allow for decommissioning of Stage II vapor recovery systems at gasoline dispensing facilities. Stage II systems are no longer necessary for the capture of vehicle refueling emissions because most gasoline vehicles are now equipped with onboard refueling vapor recovery systems which control those emissions. The amendments would also strengthen requirements for Stage I vapor control systems, which capture vapors displaced from storage tanks at gasoline dispensing facilities during tank truck deliveries, and would specify best management practices for gasoline dispensing facilities consistent with those in the federal regulations for this source category.

The SIP Revision demonstrates, using EPA methodology and conservative factors, that the emissions reductions currently associated with the Rhode Island Stage II program are *de minimis* (7.2% of refueling emissions) and that, by 2018, continued operation of a Stage II program in Rhode Island would cause excess refueling emissions in the State. The SIP Revision further shows that the emissions reductions currently associated with the Rhode Island Stage II program constitute a very small fraction of the State's total anthropogenic emissions, and, therefore, that discontinuation of the Stage II program will not interfere with Clean Air Act requirements.

The Office of Air Resources has determined that implementation of these regulatory changes would not have a significant adverse economic impact on small businesses, cities or towns. The costs associated with required upgrades of Stage I systems at gasoline dispensing facilities will be more than offset by the reduction in operating and equipment costs that will be realized by those facilities when the Stage II systems are decommissioned.

Copies of the proposed amended regulation, SIP Revision and associated fact sheet are available from the Office of Air Resources, 235 Promenade Street, Providence, Rhode Island, between 8:30 am and 4:00 PM and from the Air Resources section of the Department's web site at

www.dem.ri.gov/. For more information, contact Barbara Morin at (401) 222-4700, ext. 7012, TCDD (401) 222-6800, or by email at barbara.morin@dem.ri.gov.

Written comments may be sent or emailed to the Office of Air Resources at the above address until 4:00 PM on Wednesday, October 30, 2013, at which time the comment period will end, unless extended by the hearing officer. It is requested that persons who wish to make comments during the public hearing submit a copy of their statement for the record. Members of the Office of Air Resources may question commenters concerning their remarks.

The Department of Environmental Management building is accessible to those with disabilities. Persons with disabilities requiring accommodation should contact the Office of Air Resources at TCDD (401) 222-6800 or (401) 222-2808 at least three business days prior to the hearing.

Signed this 27th day of September 2013

Douglas McVay, Chief
Office of Air Resources

FACT SHEET

PROPOSED AMENDMENTS TO
AIR POLLUTION CONTROL REGULATION NO. 11,
"PETROLEUM LIQUIDS MARKETING AND STORAGE''

and the

RHODE ISLAND STAGE II VAPOR CONTROL PROGRAM DISCONTINUATION
STATE IMPLEMENTATION PLAN REVISION

DISCUSSION

The Clean Air Act Amendments of 1990 (CAA) required states with moderate and higher ozone nonattainment areas to promulgate regulations requiring gasoline dispensing facilities (GDFs) in those areas to install Stage II vapor control systems to capture gasoline vapors emitted during vehicle refueling operations. The CAA also required states in the Ozone Transport Region (OTR) to promulgate Stage II control programs or programs that would achieve comparable emissions reductions. Rhode Island, as a serious nonattainment area and a part of the OTR, was subject to both of those provisions and, in 1992, the Rhode Island Department of Environmental Management (RI DEM) amended Air Pollution Control Regulation No. 11, "Petroleum Liquids Marketing and Storage" to require GDFs to install and operate Stage II vapor controls.

The CAA also mandated that new light-duty vehicles must be equipped with onboard refueling vapor recovery (ORVR) systems according to a specified schedule. The phase-in of the ORVR program began with 40% of model year 1998 cars and, model year 2006, all new light duty gasoline vehicles and trucks have been equipped with ORVR systems. ORVR systems, like Stage II vapor control systems, reduce emissions associated with vehicle refueling, so Stage II controls are redundant in refueling operations involving vehicles equipped with ORVR. In fact, many Stage II systems are incompatible with ORVR; those systems actually cause excess emissions when ORVR vehicles are refueled. Therefore, the CAA stipulated that EPA may waive Stage II requirements when ORVR-equipped vehicles are in "widespread use" in the motor vehicle fleet.

On May 16, 2012, the EPA issued a rule which determined that ORVR is now in widespread use nationwide. That rule waived Stage II requirements for nonattainment areas but did not remove the CAA requirement for Stage II programs or comparable measures in the OTR. Therefore, an

OTR state that plans to discontinue its Stage II programs must demonstrate, in an amendment to its State Implementation Plans (SIP), that measures are in place in that state that achieve emissions reductions comparable to those currently achieved by the state's Stage II program. The "Rhode Island Stage II Vapor Control Program Discontinuation State Implementation Plan Revision," (SIP Revision) will serve as that demonstration for Rhode Island.

The SIP Revision demonstrates, using EPA methodology and conservative factors, that the emissions reductions associated with Stage II in 2013 are *de minimis* (7.2% of refueling emissions) and that those reductions will be reduced to 1.5% of refueling emissions in 2016 and will be zero by early 2018. Thereafter, operation of a Stage II program in Rhode Island would increase overall refueling emissions. The SIP Revision further shows that the emissions reductions associated with the Rhode Island Stage II program constitute a very small fraction of the State's total anthropogenic emissions, and, therefore, discontinuation of the Stage II program will not interfere with CAA Reasonable Further Progress or attainment requirements.

In 2012, the Rhode Island legislature promulgated RIGL § 23-23-30, which exempts new GDFs from Stage II requirements and which allows existing GDFs that remove their underground storage tanks or replace 50% or more of their dispensers to decommission their Stage II systems, with RI DEM verification and approval. Since that law became effective, more than 40 new and substantially modified GDFs in Rhode Island have been exempted from Stage II requirements.

In June 2013, after lengthy negotiations with stakeholders, the Massachusetts Department of Environmental Protection (MA DEP) agreed to terms whereby GDFs in that State would be allowed to decommission their Stage II systems. At the same time, the parties agreed that MA DEP would require Stage I vapor control systems, which control emissions displaced during tank truck deliveries of gasoline to GDF storage tanks, to be upgraded to use Stage I Enhanced Vapor Recovery (EVR) components. RI DEM is now proposing to similarly amend Stage I and Stage II requirements in Air Pollution Regulation No. 11, "Petroleum Liquid Marketing and Storage." These proposed amendments, which are outlined below, mirror the MA DEP negotiated agreement, except where indicated.

The proposed amendments would allow for discontinuing Stage II in RI as follows:

- As per RIGL § 23-23-30, new GDFs that began operation after the effective date of that legislation are not required to install Stage II.

- New GDFs that begin operation after the effective date of the Regulation No. 11 amendments will not be allowed to install Stage II.

- As per RIGL § 23-23-30, existing GDFs that remove underground storage tanks or replace 50% or more of their dispensers since that legislation became effective may, with RI DEM's verification and approval, remove their Stage II systems from operation. After the effective date of the Regulation No. 11 amendments, compliance with the decommissioning,

recordkeeping and reporting requirements for Stage II and the Stage I requirements in the amended regulation will substitute for Department verification and approval.

- After the effective date of the amendments, any GDF may remove its Stage II system from service, provided that decommissioning is done according to the following specifications:

  - Decommissioning procedures must be consistent with Section 14 of the Petroleum Equipment Institute (PEI) "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle Fueling Sites."

  - Capping vapor piping at the tank top is not required at the time of decommissioning if excavation would be required to access the vapor piping connection at the tank top. However, the vapor recovery piping must be disconnected and capped at the tank top the first time that the vapor piping-tank top connection is exposed for any reason.

  - The following tests must be conducted and passed before the GDF returns to operation after decommissioning:

    - A Pressure Decay 2-inch and 10-inchTest;
    - A Vapor Tie Test;
    - A Pressure/Vacuum Vent Valve Test;
    - For facilities with EVR rotatable product adaptors and vapor adaptors, a Static Torque Rotatable Adaptor Test,; and
    - For facilities equipped with an EVR Stage I vapor control system, either a Leak Rate of Drop Tube/Drain Valve Assembly Test or a Leak Rate of Drop Tube/Overfill Prevention Devised test.

  - The GDF must notify RI DEM 7 days in advance of decommissioning and provide a certification of completion, including test results, within 30 days after decommissioning.

- Until its Stage II system is decommissioned as specified above, a GDF must continue to operate, inspect, maintain and test its Stage II system.

- All Stage II systems must be decommissioned by December 22, 2017, the mandatory closure date for single-walled Underground Storage Tanks in RI. GDFs with vapor balance or ORVR-compatible vacuum assist Stage II systems may apply for an exemption from this requirement. (Note that the MA DEP agreement requires GDFs to decommission Stage II systems within two years and allows for a two year extension to that compliance date, but does not address exemptions to that requirement).

The Enhanced Vapor Recovery (EVR) Stage I requirements in the draft amended regulation are also consistent with the MA agreement. Specifically:

- EVR pressure-vacuum vent valves and EVR rotatable product and vapor adaptors must be installed at GDFs by 90 days after the effective date of the amendments. Co-axial systems are exempt from the adaptor requirement.

- Any GDF that begins operation after the effective date of the amendments must be equipped with an EVR Stage I system or a Stage I system composed of EVR components (a "mix and match" system) upon start-up.

- Any Stage I component that is replaced after the effective date of the amendments must be replaced with an EVR component.

- All GDFs must be equipped with an EVR Stage I system or a Stage I system composed of EVR components by 7 years after the effective date of the amendments.

- Aboveground storage tanks (ASTs) are not required to install a rotatable product adaptor or another EVR component if installation of that component is not technically feasible. (Note that this exemption is not explicitly stated in the MA DEP agreement).

- Stainless steel UL-approved spill containers that are not EVR certified are allowed if those containers are not connected to the Stage I system. (Note that this flexibility is not allowed in the MA DEP agreement).

- Weekly visual inspections and annual testing of Stage I systems using the tests listed above are required. Notification, reporting and recordkeeping requirements are similar to those currently in place for Stage II.

The proposed Regulation No. 11 amendments also include the addition of provisions from the Federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Gasoline Dispensing Facilities (FR § 63.11110, Subpart CCCCCC). When that NESHAP was first promulgated, EPA determined that GDFs that were in compliance with Regulation No. 11 prior to January 10, 2008 were also in compliance with the NESHAP vapor balance system requirements. The NESHAP allows sources to be deemed in compliance with vapor balance requirements if, prior to January 10, 2008, the source complies with an enforceable state rule that requires either an emissions reduction of at least 90% or management practices at least as stringent as those in EPA's NESHAP Table 1.

Because Regulation No. 11 Stage II provisions require CARB-certified Stage I systems, which are certified to achieve at least 90% emissions reduction, EPA Region I determined that GDFs in compliance with Regulation No. 11 prior to January 10, 2008 are also in compliance with the GDF NESHAP. Because of that equivalency determination, larger GDFs (those with monthly throughputs above 100,000) in compliance with Regulation No. 11 prior to January 10, 2008 have not been subject to the notification, testing and reporting requirements in the NESHAP. However, since Rhode Island is now proposing to remove Stage II requirements and the requirement for a CARB certified Stage I system, the EPA has directed that the NESHAP Table

1 management practices may be added to Regulation No. 11 instead of a 90% emission reduction requirement in order for sources installed prior to January 10, 2008 to follow RI Regulation No. 11 to meet NESHAP compliance. Therefore, RI is proposing to add the following management practice provisions:

- All vapor connections and lines on the storage tank must be equipped with closures that seal upon disconnect.

- The vapor line from the gasoline storage tank to the gasoline cargo tank must be vapor-tight.

- The Stage I vapor control system must be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.

- The vapor recovery and product adaptors and the method of connection with the delivery elbow shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.

- If a gauge well separate from the fill tube is used, it must have a submerged drop tube that extends the same distance from the bottom of the storage tank as that required for the tank.

- Liquid fill connections must be equipped with vapor-tight caps.

- The following measures must be taken to minimize vapor releases to the atmosphere:

    - Minimize gasoline spills;

    - Clean up spills as expeditiously as practicable;

    - Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; and

    - Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

DEMONSTRATION OF NEED

Removing Stage II requirements from Regulation No. 11 is necessary because the vehicle fleet is now largely composed of ORVR-equipped vehicles. Stage II vapor control systems do not provide additional emissions controls when ORVR-equipped vehicles are refueled and, in cases in which the Stage II system is incompatible with ORVR, actually increase refueling emissions.

Strengthening the Stage I requirements in Regulation No. 11 is necessary because, without well-operating Stage I equipment, significant discharges of gasoline vapor occur during fuel deliveries at GDFs. Gasoline vapors contain toxic substances, including benzene, a known human leukemia-causing agent. Gasoline vapors also react in the atmosphere to form ground-level ozone, a pollutant linked to a variety of respiratory ailments, and Rhode Island's air quality exceeds the National Ambient Air Quality Standard for ground-level ozone on several days each year. The California Resources Board has determined that installation of EVR systems significantly improves the effectiveness of Stage I systems, by increasing both the capture efficiency of the equipment and the time period that systems maintain compliance.

Adding the NESHAP general requirements for Stage I systems and management practices for GDFs is necessary in order for EPA to determine that the State regulation will continue to be equivalent to the Federal NESHAP after the Stage II requirements in Regulation No. 11 are removed. Without that equivalence determination, all GDFs with monthly throughputs more than 100,000 gallons per month would be subject to the testing, notification and reporting requirements in the NESHAP in addition to the State requirements.

ALTERNATIVE APPROACHES CONSIDERED

Rhode Island considered requiring only certified EVR Stage I systems, not systems made up of EVR Stage I components (mix and match systems). Since EVR Stage I control efficiency is tested as a whole system, not as individual parts, allowing only certified systems would increase confidence in the overall efficiency of the system. However, that approach was rejected because it would limit regulatory flexibility and may increase costs to GDFs. RI DEM attempted to, where possible, make the RI requirements consistent with those that emerged from the lengthy negotiations between regulators and stakeholders in Massachusetts, which allow for mix and match systems.

IDENTIFICATION OF OVERLAPPED OR DUPLICATED STATE REGULATIONS

Proposed amended Regulation No. 11 does not overlap or duplicate other state regulations.

DETERMINATION OF SIGNIFICANT ADVERSE ECONOMIC IMPACT ON SMALL BUSINESS OR ANY CITY OR TOWN

The Office of Air Resources has determined that implementation of the proposed amendments would not have a significant adverse economic impact on small businesses, cities or towns. Stage I component upgrades required 90 days after the effective date of the amendments would be associated with a cost of no more than $1,000 per facility. That expense would be more than offset by the savings associated with the discontinuation of operation of Stage II equipment, a savings that the EPA has estimated as approximately $3,000 per year per station. Other Stage I

components would be upgraded only as parts fail, at minimal incremental cost. The management practices would not be associated with incremental costs.

Copies of the proposed amended regulation and SIP Revision may be obtained at:

RI Department of Environmental Management
Office of Air Resources
235 Promenade Street
Providence, Rhode Island 02908

or by contacting the Office of Air Resources at 401-222-2808 (TCDD 401-222-6800). The proposed amended Regulation No. 11, the SIP Revision, and this fact sheet are also available in the Air Resources section of RI DEM's web site at http://www.dem.ri.gov/.

Questions about the proposed regulation and SIP Revision should be directed to Barbara Morin at 401-222-2808, ext. 7012, or by email to barbara.morin@dem.ri.gov.

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

AIR POLLUTION CONTROL REGULATION NO. 11

PETROLEUM LIQUIDS MARKETING AND STORAGE

Effective 5 July 1979

Last Amended ~~9 October 2008~~

Proposed Amendments

AUTHORITY: These regulations are authorized pursuant to R.I. Gen. Laws § 42-17.1-2(s) and 23-23, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35.

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

AIR POLLUTION CONTROL REGULATION NO. 11

PETROLEUM LIQUIDS MARKETING AND STORAGE

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RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES
AIR POLLUTION CONTROL REGULATION NO. 11

PETROLEUM LIQUIDS MARKETING AND STORAGE

11.1 Definitions

Unless otherwise expressly defined in this section, the terms used in this regulation shall be defined by reference to the Rhode Island Air Pollution Control General Definitions Regulation. As used in this regulation, the following terms shall, where the context permits, be construed as follows:

11.1.1 **"Petroleum liquids"** means crude oil, condensate and any finished or intermediate products manufactured or extracted in a petroleum refinery whose true vapor pressure is greater than 1.52 psia (10.5 kilo pascals) at 69^{o}F.

11.1.2 **"Bulk gasoline terminal"** means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, railroad tank car, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck; and has a daily throughput of more than 20,000 gallons of gasoline.

11.1.3 **"Bulk gasoline plant"** means a gasoline storage and distribution facility with an average daily throughput of 20,000 gallons or less but greater than 4,000 gallons which receives gasoline from bulk terminals by trailer transport or railroad tank car, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and service stations.

11.1.4 **"Gasoline"** means any petroleum distillate having a Reid vapor pressure of more than 4.0 psia as determined by ASTM Method D323. This term includes but is not limited to mixtures of alcohols and gasoline.

11.1.5 **"Splash filling"** means the filling of a tank truck or stationary storage tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.

11.1.6 **"Bottom filling"** means the filling of a tank truck or stationary storage tank through an opening that is flush with the tank bottom.

11.1.7 **"Submerged filling"** means the filling of a tank truck or stationary tank

through a submerged fill pipe whose discharge opening is entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid.

11.1.8 **"Submerged fill pipe"** means any fill pipe the discharge opening of which is entirely submerged when the liquid level is six inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean any fill pipe the discharge of which is entirely submerged when the liquid level is 18 inches or twice the diameter of the fill pipe, whichever is greater, above the bottom of the tank.

11.1.9 **"Vapor balance system"** means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading vessel and a receiving vessel such that vapors displaced from the receiving vessel are transferred to the vessel being unloaded.

11.1.10 **"Owner"** means any person who has legal or equitable title to the gasoline storage vessel at a facility.

11.1.11 **"Operator"** means any person who leases, operates, controls or supervises a facility at which gasoline is dispensed.

11.1.12 **"Gasoline dispensing facility"** means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage vessels.

11.1.13 **"Daily throughput"** means the average amount of gasoline that a bulk gasoline terminal or plant dispenses in a day from that facility and is defined as the thirty day rolling average throughput of the facility. This is used to determine applicability, not compliance.

11.1.14 **"Vapor tight"** means ~~the condition where a combustible gas detector does not detect a leak of volatile organic materials when the probe of this meter is held parallel to the flow of volatile organic materials from the leak source.~~ equipment that allows no loss of vapors. Equipment is considered vapor-tight if the vapor concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

11.1.15 **"Leak"** means a meter reading from a combustible gas detector greater or equal to 100 percent lower explosive limit as propane.

11.1.16 **"Vapor"** means those components of gasoline that have been volatilized to the gaseous phase from the liquid phase.

11.1.17 **"External floating roo**f" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.

11.1.18 **"Liquid-mounted seal"** means a primary seal mounted in continuous contact with the liquid around the circumference of the tank between the tank wall and the floating roof.

11.1.19 **"Vapor-mounted seal"** means a primary seal mounted so there is a vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

11.1.20 **"Best extent possible"** means there shall be no reading at 2.5 centimeters from any potential leak source, greater than or equal to 100% of the lower explosive limit, LEL, measured as propane, as detected by a combustible gas detector using the test procedure described in Appendix B of the EPA document entitled "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems" (EPA-450/2-78-051).

11.1.21 **"Substantially modified"** means a modification of an existing gasoline dispensing facility which involves the addition, repair, replacement, or reconditioning of stationary storage tanks. Any excavation at an existing gasoline dispensing facility which has the potential to affect the integrity or pitch of any Stage II vapor return, manifold or vent piping is also considered a substantial modification.

11.1.22 **"Stage II vapor collection and control system"** means a system which collects gasoline vapors displaced from motor vehicle gasoline tanks during refueling and which routes the vapors to a stationary storage tank.

11.1.23 **"Monthly throughput"** means the amount of gasoline that a gasoline dispensing facility dispenses in a month. This amount is used to determine applicability, not compliance.

11.1.24 **"Vacuum assist system"** means a Stage II vapor collection and control system which employs a pump, blower or other vacuum inducing device to collect and/or process gasoline vapors.

11.1.25 "**Corporate or commercial fleets"** means vehicles used for business purposes which are owned by corporations, governments, universities or other organizations.

11.1.26 **“Onboard Refueling Vapor Recovery” or ORVR** means a vehicle emission control system that captures fuel vapors from the vehicle gas tank during refueling.

11.1.27 **"Stage I vapor control system"** means a closed system between the vapor spaces of an unloading gasoline tank truck and a receiving gasoline dispensing facility storage tank such that vapors displaced from the storage tank are transferred to the tank truck that is being unloaded.

11.2 Storage of Petroleum Liquids - Fixed Roof Tanks

11.2.1 Prohibitions and Requirements

11.2.1.1 No person shall place, store or hold in any stationary vessel, reservoir, or other container of more than 40,000 gallons capacity any petroleum liquids unless such tank reservoir or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the outdoor atmosphere unless:

(a) the source utilizes an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall such that:

(1) the cover must float uniformly on the liquid;

(2) there is no accumulated liquid on the cover, and;

(3) the seal is intact and uniformly in place around the circumference of the cover between the cover and tank wall, or

(b) the source utilizes an alternative control device that is at least 95% effective at reducing or recovering VOC emissions, approved by the Director, and

(c) the source is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials, and

(d) where applicable, all openings, except stub drains, are equipped with covers, lids, or seals such that:

(1) the cover, lid, or seal is in the closed position at all times except when in actual use, and

(2) automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports, and

(3) rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting, and

(e) routine visual inspections of the internal floating roof and the primary and secondary seals are conducted through roof hatches on an annual basis , and

(f) a complete visual inspection of the internal floating roof, the primary and secondary seals, gaskets, slotted membranes and sleeve seals is conducted whenever the tank is emptied or once every ten years, whichever is more frequent, or

(g) the source utilized a vapor recovery system consisting of a device capable of collecting the vapor from volatile organic liquids and gases so as to prevent their emissions to the outdoor atmosphere. All tank gauging and sampling devices shall be gas tight except when gauging or sampling is taking place.

11.2.2 Records

11.2.2.1 Records are to be maintained at the facility by the owner or operator of a source defined in Subsection 11.2.1.1 and shall include:

(a) Reports of the results of inspections conducted under Subsections 11.2.1.1 (e) and 11.2.1.1 (f).

(b) Records of daily throughput quantities, types of volatile petroleum liquids, average monthly storage temperature, and true vapor pressure of the stored liquid.

(c) Records for both scheduled and unscheduled maintenance.

11.2.2.2 Records cited in Subsection 11.2.2.1 shall be maintained for a

period of three (3) years and shall be accessible for review by the Director, ~~or~~ personnel designated by the Director, or the EPA.

11.3 Bulk Gasoline Terminals

11.3.1 This section will apply to bulk gasoline terminals and appur~~n~~tenant equipment necessary to load and unload the tank trucks, railroad tank cars or trailer compartment. If a source is ever considered a bulk terminal because it surpasses the daily throughput under the definition in 11.1.2 of this regulation, it is always subject to this regulation even if it goes below the daily throughput.

11.3.2 Prohibitions

11.3.2.1 No person shall load or unload gasoline into any tank trucks, railroad tank cars, or trailers from any bulk gasoline terminal unless the above-mentioned vessels are equipped with a vapor balance system, and

(a) the bulk gasoline terminal is equipped with a vapor control system properly installed, maintained and in good working order, in operation and that prevents emissions to the atmosphere from exceeding 0.30 grams per gallon (80 grams/1000 liters) of gasoline loaded over any 6 hour period as determined by 11.3.5.1. The vapor collection and processing equipment must be designed and operated to prevent gauge pressure in the tank truck from exceeding 18 inches of water and prevent vacuum from exceeding 6 inches of water, and

(b) a connecting pipe or hose from the loading rack to the delivery vessel is equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of volatile organic materials to the best extent possible, and

(c) a vapor space connection on the tank truck, railroad tank car, or trailer equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of volatile organic materials to the best extent possible.

(d) the bulk gasoline terminal is equipped with a vapor control system, capable of complying with paragraph (a) of this

section, properly installed, in good working order, in operation and consistent with one of the following:

(1) an adsorber or condensation system which processes and recovers at least 90 percent by weight of all vapors and gases from the equipment being controlled; or,

(2) a vapor collection system which directs all vapor to fuel gas system and reduces emissions by at least 90 percent; or,

(3) a control system determined to be equally effective and approved by the Director.

11.3.2.2 Sources affected under Section 11.3 may not:

(a) allow gasoline to be discarded in sewers or stored in open containers or handled in any manner that would result in evaporation, nor

(b) allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings.

11.3.2.3 All pumps and compressors handling gasoline shall have mechanical seals or other equipment for the purposes of air pollution control as approved by the Director and EPA. The seals or other equipment, when tested by a combustible gas detector at 2.5 centimeters from any potential leak points, shall give no reading of greater than 100% of the lower explosive limit, measured as propane.

11.3.2.4 The emergency venting of vessels covered by Subsection 11.3.2.2 shall be in accordance with the federal DOT specifications for cargo tanks and tank cars authorized to carry hazardous materials. Emergency venting shall not be considered a violation.

11.3.3 Records

11.3.3.1 Records shall be maintained at the facility by the owner or operator of a bulk gasoline terminal and shall include:

(a) Records of daily throughput quantities of gasoline.

(b) Records for both scheduled and unscheduled maintenance of the vapor control system that is described in Subsection 11.3.2.1 (a).

11.3.3.2 Records cited in Subsection 11.3.3.1 should be maintained for a period of three years and should be accessible for review by the Director, ~~or~~ personnel designated by the Director, or the EPA.

11.3.4 Compliance

11.3.4.1 Compliance Schedules - All persons owning or controlling sources as described in Subsection 11.3.1 shall achieve compliance with Subsection 11.3.1 (a) through (c) not later than 1 July 1981 in accordance with the following schedule:

(a) Not later than 1 January 1980 - submit final plans, specifications and maintenance schedules of equipment to be used to prevent gasoline vapor loss to the atmosphere and to comply with Subsections 11.3.2.1 (a), (b) and (c) to the Director for approval in accordance with Section 23-23-5 (j) of the General Laws of 1956, as amended, and Air Pollution Control Regulation 9.

(b) Not later than 1 March 1980 - award all necessary contracts for the implementation of the approved plans and specifications.

(c) not later than 1 October 1980 - submit a progress report to the Director on the expected delivery date of all capital equipment ordered to comply with Subsection 11.3.2.1 (a) through (c).

(d) Not later than 1 March 1981 - initiate any construction, modification and/or installation required by the approved plans and specifications.

(e) Not later than 1 July 1981 - complete any actions described in Subsection 11.3.4.1 (d).

11.3.4.2 The achievement of Items (b), (d) and (e) of Subsection 11.3.4.1 will be reported in writing within five (5) days to the Director.

11.3.4.3 All records and reports will include supporting documentation as appropriate.

11.3.5 Compliance Test Methods

11.3.5.1 Compliance with the emission limitations set forth in Section 11.3 shall be determined by using the procedures, compliance averaging times (6 hours), and test methods which are detailed in 40 CFR 60.503 or any other method approved by the Director and EPA.

11.4 Bulk Gasoline Plants

11.4.1 This regulation will apply to the unloading, loading and storage facilities of all bulk gasoline plants and all tank trucks delivering or receiving gasoline at bulk gasoline plants. If a source is ever considered a bulk plant because it surpasses the daily throughput under the definition in 11.1.3 of this regulation, it is always subject to this regulation even if it goes below the daily throughput.

11.4.2 Prohibitions

11.4.2.1 No owner or operator of a bulk gasoline plant, tank truck, railroad tank car or trailer may permit the loading or unloading of account trucks, tank trucks, railroad tank cars or trailers at a bulk gasoline plant unless each account truck, tank truck, railroad tank car, or trailer is equipped with a vapor balance system as described in subsection 11.4.2.2 and approved by the Director, and

(a) equipment is available at the bulk gasoline plant to provide for the submerged filling of each tank truck, railroad tank car or trailer, or

(b) each tank truck, railroad tank car or trailer is equipped for bottom filling.

11.4.2.2 Vapor balance systems required under Subsection 11.4.2.1 shall prevent the release of volatile organic material to the atmosphere to the best extent possible and shall consist of the following major components:

(a) a vapor space connection on the stationary storage tank equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of volatile organic material to the best extent possible, and

(b) a connecting pipe or hose equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of volatile organic material to the best extent possible, and

(c) a vapor space connection on the tank truck, railroad tank car or trailer equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of volatile organic material to the best extent possible.

11.4.2.3 No owner or operator of a bulk gasoline plant may permit gasoline to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.

11.4.3 Records

11.4.3.1 Records shall be maintained at the facility by the owner or operator of a bulk gasoline plant and shall include:

(a) records of daily throughput quantities of gasoline,

(b) records for both scheduled and unscheduled maintenance of vapor balance equipment as described in Subsection 11.4.2.2.

11.4.3.2 Records cited in Subsection 11.4.3.1 should be maintained for a period of three (3) years and should be accessible for review by the Director, ~~or~~ personnel designated by the Director, or the EPA.

11.4.4 Compliance

11.4.4.1 Compliance Schedules - All persons owning or controlling sources as described in Subsection 11.4.1 shall register with the Director no later than three (3) months after the effective date of this regulation. Compliance schedules will be negotiated on a case-by-case basis.

11.4.5 Compliance Test Methods - Compliance with the emission limitations set forth in Section 11.4 shall be determined by using the procedures and test methods which are detailed in Appendices B and C of EPA publication entitled Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems, Guideline Series Publication No. EPA-450/2-78-051 (OAQPS No. 1.2-119).

11.5 Gasoline ~~Service Station~~ Dispensing Facility Stage I Vapor Controls and General Requirements

11.5.1 ~~This~~ Subsection 11.5.2 ~~will~~ shall apply to all gasoline dispensing facilities with the following exceptions:

(a) Stationary gasoline storage vessels of less than 550 gallons capacity used exclusively for the fueling of implements of husbandry, provided the containers are equipped with submerged fill pipes, or

(b) Stationary storage vessels located at a gasoline dispensing facility with a capacity of less than 2000 gallons which is in place before 1 July 1979, or

(c) any stationary storage vessels located at a gasoline dispensing facility with a capacity of 250 gallons or less which is installed after the effective date of this regulation.

(d) Any gasoline dispensing facility that is solely serviced by account trucks owned or under the control of bulk gasoline plants that are exempt from Section 11.4 of this regulation.

~~(e) Any gasoline dispensing facility with an annual throughput of 120,000 gallons or less, a rolling 30 day throughput of less than 10,000 gallons, certified by the Division. The owner/operator of the affected facility shall submit tax records, sales slips or any other material to certify the quantity of the rolling 30 day throughput is less than 10,000 gallons for the most recent calendar year. A request for exemption certification shall be made to the Division no later than 1 May 1981.~~

11.5.2 Prohibitions

11.5.2.1 Except as provided in Subsection 11.5.1, no person may transfer or cause or allow the transfer of gasoline from any delivery vessel into any stationary storage vessel unless the stationary storage vessel is equipped with a submerged fill pipe and the vapors displaced from the storage vessel during filling are processed by a Stage I vapor control system in accordance with Subsection 11.5.2.2.

11.5.2.2 The Stage I vapor control system required by Subsection 11.5.2.1 shall ~~include one or more of~~ be subject to the following conditions:

~~(a) A vapor tight line from the storage vessel to the delivery vessel and a system that will ensure that vapors will be transferred from the storage vessel to the delivery vessel to include the following systems:~~

~~(1) Installation of a vent pipe restrictive device to include a vent pipe cape having an orifice of 1/2 inch to 3/4 inch ID, and~~

~~(2) The vapor tight line from the storage vessel to the delivery vessel must be equipped with interlocking connections which will prevent fuel delivery unless the vapor line is connected.~~

~~(b) A refrigeration-condensation system or equivalent designed to recover or process vapors that prevents emissions of volatile organic compounds to the atmosphere from exceeding 0.30 grams per gallon (80.0 grams/1000 liters) of gasoline loaded, or~~

~~(c) A system demonstrated to have control efficiency equivalent to or greater than provided under Subsection 11.5.2.2 (a) and (b) and approved by the Director and EPA.~~

(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.

(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in Subsection 11.1.14.

(c) The Stage I vapor control system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.

(d) The vapor recovery and product adaptors and the method of connection with the delivery elbow shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.

(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same

distance from the bottom of the storage tank as specified in Subsection 11.1.8.

(f) Liquid fill connections shall be equipped with vapor-tight caps.

11.5.2.3 The vapor-laden delivery vessel shall be subject to the following conditions:

(a) The delivery vessel must be designed and maintained to be vapor tight at all times, and

(b) The vapor-laden delivery vessel may be re-filled only at:

(1) bulk gasoline terminals complying with Section 11.3, or

(2) bulk gasoline plants complying with Section 11.4.

11.5.2.4 Each owner of a gasoline storage vessel and gasoline delivery vessel covered by Subsection 11.5.2.1 shall:

(a) purchase and install all necessary control systems and make all necessary process modifications to comply with Subsections 11.5.2.2, ~~and~~ 11.5.2.3, and

(b) provide instructions to the operator of the gasoline dispensing facility utilizing a Stage I vapor control system as required in Subsection 11.5.2.2 ~~(b)~~ describing necessary maintenance ~~O~~operations and procedures for prompt notification of the owner in case of any malfunctions of the control system, and

(c) repair, replace or modify any worn out or malfunctioning component or element of design.

11.5.2.5 Each operator of a gasoline dispensing facility covered by Subsection 11.5.2.2 shall:

(a) maintain and operate the Stage I vapor control system in accordance with the specifications and the operating and maintenance procedures specified by the owner, and

(b) promptly notify the owner of the Stage I vapor control

system of any scheduled maintenance or malfunction requiring replacement or repair of major components in the system.

11.5.2.6 The Stage I vapor control system required in Subsection 11.5.2.1 shall be subject to the following conditions:

(a) On and after [insert the date 90 days after effective date of these amendments] all gasoline dispensing facilities shall be equipped with a CARB-certified Enhanced Vapor Recovery (EVR) Stage I pressure-vacuum (PV) vent valve;

(b) On and after [insert the date 90 days after effective date of these amendments] all gasoline dispensing facilities, except those facilities with co-axial tank systems, shall be equipped with CARB-certified EVR Stage I rotatable product and vapor adaptors;

(c) All gasoline dispensing facilities that begin operation or install a fuel storage tank on or after [insert the effective date of these amendments] must be equipped with a CARB-certified EVR Stage I vapor control system or a Stage I vapor control system composed of EVR components upon facility start-up following that installation;

(d) Any component of a Stage I vapor control system that is replaced after [insert the effective date of these amendments] shall be replaced with a CARB-certified EVR Stage I component;

(e) On and after [insert the date 7 years after the effective date of these amendments], gasoline dispensing systems must be equipped with a CARB-certified EVR Stage I vapor control system or a Stage I vapor control system composed of EVR components; and

(f) Aboveground storage tanks at gasoline dispensing facilities are exempt from the requirement in this subsection to install a rotatable product adaptor or another EVR Stage I component if such installation is not technically feasible. Documentation of such technical infeasibility shall be made available to the Director on request.

(g) A stainless steel UL-approved spill container that is not EVR certified may be used in the place of an EVR spill container provided that the spill container is not designed to attach to the Stage I vapor control system.

11.5.2.7 The owner or operator of a gasoline dispensing facility that is not equipped with a Stage II vapor collection and control system shall:

(a) Visually inspect the facility's Stage I vapor control system weekly;

(b) Perform the following Stage I vapor control system tests at least once every twelve months:

(1) A Pressure Decay 2-inch Test, using CARB test procedure TP-201.3, demonstrating that the static pressure of the system meets the following specification:

$Pf = 2e^{-500.887/v}$

Where:

Pf = Minimum allowable final pressure, inches of water.
v = Total ullage affected by the test, gallons.
e = Dimensionless constant equal to approximately 2.718.
2 = The initial pressure, inches water;

(2) A Vapor Tie Test, using the San Diego Air Pollution Control District test procedure TP-96-1, section 5.1.9;

(3) A Pressure/Vacuum Vent Valve Test, using CARB test procedure TP-201.1E;

(4) For facilities with EVR rotatable product adaptors and/or vapor adaptors, a Static Torque Rotatable Adaptor Test, using CARB test procedure TP-201.1B; and

(5) For facilities with a Stage I EVR system, either a Leak Rate of Drop Tube/Drain Valve Assembly Test using CARB test procedure TP-201.1C or a Leak Rate of Drop Tube/Overfill Prevention

Devised test using CARB test procedure TP-201.1D.

(c) Notify the Department of the date that testing will be conducted at least seven (7) days in advance of testing and certify to the Department in writing within 15 days of the test that testing has been completed. Such certification shall be signed by the owner or operator of the facility and shall include a list of Stage I EVR components operating at the facility and the results of the tests required in this subsection. Test results shall be signed and certified as accurate by the person who conducted the tests.

(d) Immediately replace any component of a Stage I vapor control system that is not operating properly with a properly functioning comparable EVR component.

(e) Maintain the following records for a period of five years and make those records available for inspection by representatives of the Department or the EPA on request:

(1) The dates and results of weekly visual inspections as required in Subsection 11.5.2.7(a),

(2) The dates and results of tests performed pursuant to Subsection 11.5.2.7(b),

(3) Identification of Stage I vapor control system components that are replaced, the replacement components installed, and dates of such replacements, and

(4) Gasoline throughput quantities.

11.5.3 General Requirements for Gasoline Dispensing Facilities

11.5.3.1 The owner or operator of a gasoline dispensing facility shall use the following measures to minimize vapor releases to the atmosphere:

(a) Minimize gasoline spills;

(b) Clean up spills as expeditiously as practicable;

(c) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; and

(d) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

~~**11.5.3 Records**~~

~~11.5.3.1 The operator shall maintain gauges, meters, or other specified equipment in proper working order. The operator of a gasoline dispensing facility covered by Subsection 11.5.2.2(b) shall maintain records at the facility and shall include:~~

~~(a) the scheduled date for maintenance or the date a malfunction was detected, and~~

~~(b) the date the need for maintenance or malfunction of major system components was reported to the owner, and~~

~~(c) the date the maintenance was performed or the malfunction corrected by either the operator or the owner.~~

~~(d) records of daily throughput quantities.~~

~~11.5.3.2 Records cited in Subsection 11.5.3.1 shall be maintained for a period of three (3) years and should be accessible for review by the Director or personnel designated by the Director.~~

~~**11.5.4 Compliance**~~

~~11.5.4.1 Compliance Schedule - All persons owning or controlling gasoline delivery vessels or gasoline storage vessels as described in Subsections 11.5.2.1, 11.5.2.2 and 11.5.2.3 shall achieve compliance with Subsection 11.5.2.4 not later than 1 July 1981 and shall achieve compliance with this subsection in accordance with the following schedule:~~

~~(a) No later than three (3) months after the effective date of this regulation all persons owning gasoline delivery or storage vessels shall submit to the Director the following information:~~

~~(1) The number of storage or delivery vessels that are~~

~~controlled by said person,~~

~~(2) The number of storage or delivery vessels that would currently comply with the regulations,~~

~~(3) The approximate yearly throughput of gasoline from each gasoline dispensing facility.~~

~~(b) Not later than 1 October 1979 submit final plans, specifications and maintenance schedules of equipment used to prevent gasoline vapor loss to the atmosphere and used to comply with Subsection 11.5.2.4 to the Director for approval in accordance with Section 23-23-5 (j) of the General Laws of 1956, as amended.~~

~~(c) Not later than 1 January 1980 award all necessary contracts for implementation of the approved plans and specifications.~~

~~(d) Not later than 1 March 1980 initiate any construction, modification and/or installation required by the approved plans and specifications.~~

~~(e) Submit to the Director on 1 October 1980 a progress report of the activities required by Subsection 11.5.4.1 (d).~~

~~11.5.4.2 The achievement of Item (c) of Subsection 11.5.4.1 shall be reported in written form within five (5) days to the Director.~~

~~11.5.4.3 All records and reports will include supporting documentation as appropriate.~~

~~11.5.5 Compliance Test Methods~~

~~11.5.5.1 Compliance test methods to be used in Section 11.5 of this regulation will follow Appendix B - Gasoline Vapor Leak Detection Procedures by Combustible Gas Detector, which is detailed in the EPA document entitled Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems, EPA-450/2-78-051, OAQPS No. 1.2-119.~~

~~11.5.5.2 The compliance test method as described in Subsection 11.5.5.1~~

~~will be used to determine if a vapor-tight condition exists in:~~

~~(a) the line from the storage vessel to the delivery vessel during gasoline transfer, as described in Subsection 11.5.2.2 (a), and~~

~~(b) the vapor-laden delivery vessel as described in Subsection 11.5.2.3 (a).~~

11.6 Storage of Petroleum Liquids: External Floating Roof Vessels

11.6.1 Prohibitions

11.6.1.1 No person shall place, store or hold gasoline in a storage tank having a capacity of 40,000 gallons or greater that is equipped with an external floating roof unless the vessel has been fitted with:

(a) a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal), or

(b) a closure or other device which controls volatile organic compound emissions by attaining or exceeding the requirements of Section 11.6.1.2 for a secondary seal required under this regulation and approved by the Director and EPA.

11.6.1.2 All seal closure devices must meet the following requirements:

(a) There are no visible holes, tears or other openings in the seal(s) or seal fabric,

(b) The seal(s) is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall, and

(c) For tanks having vapor mounted primary seals, the accumulated area of gaps exceeding 0.32 cm (1/8 in.) in width between the secondary seal and the tank wall shall not exceed 21.2 cm^2 per meter of tank diameter (1.0 in.2 per ft. of tank diameter), as determined by the method in Subsection 11.6.4.3.

11.6.1.3 All openings in the external floating roof, except for automatic bleeder vents, rim space vents and leg sleeves, must:

(a) be equipped with covers, seals or lids in the closed position except when the openings are in actual use, and
(b) provide projections below the liquid surface at all times.

11.6.1.4 Automatic bleeder vents must be closed at all times except when the roof is being floated off or being landed on the roof leg supports.

11.6.1.5 Rim vents shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.

11.6.1.6 Emergency roof drains shall be provided with slotted membrane fabric covers or equivalent covers which cover at least 90 percent of the area of the opening.

11.6.2 Inspection and Reporting Requirements

11.6.2.1 The owner or operator of a petroleum liquid storage vessel with an external floating roof subject to this regulation shall:

(a) perform routine inspections semiannually in order to ensure compliance with Section 11.6 of this regulation and the inspection of the secondary seal gap,

(b) measure the secondary seal gap annually in accordance with Subsection 11.6.4.3 (a) and (b) when the floating roof is equipped with a vapor-mounted primary seal or liquid-mounted primary seal, except that measurements in riveted tanks shall not be made when the roof is floating at a level that places the secondary seal in contact with a horizontal rivet seam,

(c) maintain records at the facility of the results of the inspections required above for a period of three (3) years after an inspection,

(d) provide copies of all records under this section to the Director, upon verbal or written request, at any reasonable time.

(e) Maintain records at the facility which report monthly throughput quantities, types of petroleum liquids stored, average monthly storage temperature, and true vapor

pressures of the stored liquid.

11.6.3 Compliance Schedules

11.6.3.1 The owner or operator of a petroleum liquid storage vessel with an external floating roof subject to this regulation shall:

(a) submit a schedule to the Director within three (3) months of the effective date of this regulation that contains the following elements:

(1) date when final plans for the emission control system are to be submitted, and

(2) date when contracts are to be awarded for the emission control system.

(b) complete on-site construction or installation of the emission control equipment within ten (10) months of the effective date of this regulation, and

(c) achieve final compliance within twelve (12) months of the effective date of this regulation.

11.6.3.2 The owner or operator subject to a compliance schedule of this section shall certify to the Director within five (5) days after the deadline for each increment of progress as to whether the required increment of progress has been met.

11.6.4 Testing and Monitoring

11.6.4.1 The owner or operator of any volatile organic compound source required to comply with Section 11.6 of this regulation shall demonstrate compliance by the methods of this section or an alternative method approved by the Director and EPA.

11.6.4.2 A person proposing to conduct a volatile organic compound emissions test shall notify the Director of the intent to test not less than fifteen (15) days before the proposed initiation of the tests so the Director may have the option to observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

11.6.4.3 Compliance with Subsection 11.6.1.2 (c) of this regulation shall be

determined by:

(a) physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 0.32 cm (1/8 in.) uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and tank wall, and

(b) summing the area of the individual gaps.

11.7 Reid Vapor Pressure

11.7.1 No person shall store, sell, or supply as fuel at or from bulk gasoline terminals and bulk gasoline plants a gasoline having a Reid Vapor Pressure greater than 9.0 pounds per square inch, except as specified in Subsection 11.7.2, during the period 1 May through 15 September of each year, beginning in 1989.

(a) No person shall deliver gasoline having a Reid Vapor Pressure greater than 9.0 pounds per square inch to a gasoline dispensing facility during the period 1 May through 15 September of each year, beginning in 1989.

(b) No gasoline dispensing facility shall receive gasoline having a Reid Vapor Pressure greater than 9.0 pounds per square inch during the period 1 May through 15 September of each year, beginning in 1989.

11.7.2 No person shall store, sell, or supply as fuel at or from bulk gasoline terminals and bulk gasoline plants a gasoline-ethanol blend containing at least 9% ethanol which has a Reid Vapor Pressure greater than 10.0 pounds per square inch during the period 1 May through 15 September of each year, beginning in 1989.

(a) No person shall deliver a gasoline-ethanol blend containing at least 9% ethanol which has a Reid Vapor Pressure greater than 10.0 pounds per square inch to a gasoline dispensing facility during the period 1 May through 15 September of each year, beginning in 1989.

(b) No gasoline dispensing facility shall receive a gasoline-ethanol blend containing at least 9% ethanol which has a Reid Vapor Pressure greater than 10.0 pounds per square inch during the period 1 May through 15 September of each year, beginning in 1989.

11.7.3 Sampling and testing of gasoline shall be in accordance with ASTM Method D323-82 or any equivalent method approved by the Director and EPA.

11.8 Tank Truck Certification and Vapor Collection Systems

11.8.1 This regulation shall apply to all gasoline tank trucks equipped for gasoline vapor collection.

11.8.2 Prohibitions

11.8.2.1 No person shall allow a gasoline tank truck to be filled or emptied unless the gasoline tank truck:

(a) is tested annually according to the test procedure referenced in Section 11.8.4;

(b) sustains a pressure change of no more than .11 psi (3 inches of water) in five minutes when pressurized to a gauge pressure of .65 psi (18 inches of water) or evacuated to a gauge pressure of.22 psi (6 inches of water) during the testing required in Section 11.8.2.1 (a);

(c) is repaired by the owner or operator and retested within 15 days of testing if it does not meet the criteria of Section 11.8.2.1 (b);

(d) displays a sticker near the Department of Transportation Certification plate, which:

(1) shows the date the gasoline tank truck last passed the test required in Section 11.8.2.1(a);

(2) shows the identification number of the gasoline tank truck; and,

(3) expires not more than one year from the date of the leak tight test.

11.8.2.2 No person shall unload gasoline into a storage tank at a gasoline dispensing facility subject Subsection 11.5.2 unless the following conditions are met:

(a) All hoses are properly connected to the Stage I vapor recovery system;

(b) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect;

(c) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight, as defined in Subsection 11.1.14;

(d) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the Stage I equipment on the gasoline dispensing facility's storage tank; and

(e) All hatches on the tank truck are closed and securely fastened.

11.8.2.~~2~~3 The owner or operator of a vapor collection system shall:

(a) design and operate the vapor collection system and the gasoline loading equipment in a manner that prevents:

(1) gauge pressure from exceeding .65 psi (18 inches of water) and a vacuum from exceeding .22 psi (6 inches of water) in the gasoline tank truck;

(2) a reading equal to or greater than 100% of the lower explosive limit, LEL, measured as propane, at 2.5 centimeters from any potential leak source when measured by the method referenced in Section 11.8.4 during the loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals;

(3) visible leaks during the loading and unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals; and,

(b) within 15 days , repair and retest a vapor collection, or control system that exceeds the limits in Section 11.8.2(a)(1).

11.8.2.~~3~~4 The Director may, at any time, monitor a gasoline tank truck, vapor collection system, or vapor control system, by the method referenced in Section 11.8.4, to confirm continuing compliance with Sections 11.8.2.1, 11.8.2.2 and 11.8.2.~~2~~3.

11.8.3 Compliance Schedule

11.8.3.1 The owner or operator of a gasoline tank truck subject to this regulation must meet the following increments of progress:

(a) Submit plans to the Director for operating and maintenance procedures to implement Sections 11.8.2 and 11.8.4 before January 15, 1990;

(b) Issue purchase orders for contracts for all needed test equipment before February 15, 1990;

(c) Commence certification of gasoline tank trucks before May 15, 1990, and;

(d) Complete initial certification of all gasoline tank trucks by June 1, 1990.

11.8.3.2 The owner or operator of a gasoline tank truck subject to a compliance schedule of this section shall certify to the Director within 5 days after the deadline for each increment of progress, whether the required increment of progress has been met.

11.8.4 Testing and Monitoring

11.8.4.1 The owner or operator of a gasoline tank truck subject to this regulation shall, at his own expense, demonstrate compliance with Section 11.8.2 by the methods of Section 11.8.4.3 or an alternative method approved by the Director and EPA. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing or tank truck maintenance and testing and/or experience in the use of a combustible gas detector in the field of air pollution.

11.8.4.2 The owner or operator of a gasoline tank truck subject to this regulation shall notify the Director in writing of the date and location of the certification test at least 10 days before the anticipated test date.

11.8.4.3 Test procedure to determine compliance with Section 11.8.2 must be consistent with the test procedure described in 40 CFR Part 60,Appendix A, Method 27.

11.8.4.4 Monitoring to confirm the continuing existence of leak tight conditions shall be consistent with the procedures described in

Appendix B of the OAQPS Guideline Series document, "Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA 450/2-78-051 or an alternative method approved by the Director and EPA.

11.8.5 Recordkeeping and Reporting

11.8.5.1 An owner or operator subject to section 11.8 shall maintain records of all certification testing and repairs. The records must identify the gasoline tank truck, vapor collection system, or vapor control system; the date of repair; and, if applicable , the type of repair and the date of retest. The records must be maintained in a legible, readily available condition for at least 2 years after the date of testing or repair was completed.

11.8.5.2 The records for certification tests required by Section 11.8.5.1 of this section, shall, as a minimum, contain:

(a) the gasoline tank truck identification number;

(b) the initial test pressure and the time of reading;

(c) the final test pressure and the time of reading;

(d) the initial test vacuum and the time of reading;

(e) the final test vacuum and the time of reading;

(f) at the top of each report page shall be the company name, and the date and location of the tests on that page; and,

(g) name, address and title of person conducting the test.

11.8.5.3 Copies of all records and reports under this Section shall immediately be made available to the Director and/or EPA, upon verbal or written request, at any reasonable time.

11.9 Any equivalence approval required by EPA in this regulation will not be effective until approved as a single source revision to the State Implementation Plan.

11.10 Gasoline Dispensing Facilities - Stage II Vapor Controls

11.10.1 The requirements of this section shall apply to:

(a) All gasoline dispensing facilities constructed or substantially modified after 15 November 1992.

(b) All other gasoline dispensing facilities which have or have had a monthly throughput of greater than 10,000 gallons in any one month after November 1991.

(c) The requirements in this section shall be presumed to apply to all gasoline dispensing facilities. It is the obligation of the person who owns, operates, leases, or controls a gasoline dispensing facility to demonstrate to the Department, in writing and with clear and convincing evidence, that the facility should be exempted from this regulation because its throughput has not exceeded 10,000 gallons in any month after November 1991. Any such exempted facility shall be required to comply with the recordkeeping and reporting requirements specified in Subsections 11.10.3.1 and 11.10.3.9.

(d) The requirements in this section shall not apply to gasoline dispensing facilities which dispense gasoline solely to marine vessels.

(e) Facilities constructed or substantially modified after 15 November 1992 may submit to the Department, in writing, a request for an exemption to the requirements of this section. Exemption requests must demonstrate that monthly throughput has not exceeded 10,000 gallons in any month since November 1991 and will not exceed 10,000 gallons in any future month and that installation of a Stage II system at the facility is not technically and/or economically feasible and must include, at a minimum, the following information:

(1) The nature of the facility;

(2) The number of dispensers, hoses and nozzles at the facility;

(3) The number and volume of all gasoline storage tanks at the facility; and

(4) Gasoline throughput for the facility for every month for the two years preceding the request or, for new facilities, expected maximum monthly gasoline throughput.

Any facility that is granted an exemption by the Department pursuant to this subsection shall be required to comply with the recordkeeping and reporting requirements specified in Subsections 11.10.3.1 and 11.10.3.10.

(f) Gasoline dispensing facilities that dispense fuel exclusively to rental cars or corporate or commercial fleets may submit to the Department, in writing, a request for an exemption to the requirements of this Subsection. Exemption requests must demonstrate that at least 95% of the vehicles fueled at the facility are and will continue to be equipped with an onboard refueling vapor recovery (ORVR) system.

Any facility that is granted an exemption by the Department pursuant to this Subsection shall be required to comply with the recordkeeping and reporting requirements specified in Subsections 11.10.3.1 and 11.10.3.10 and the Stage I requirements in Subsection 11.5.2 and to certify to the Department, upon request, that at least 95% of the vehicles fueled at the facility continue to be equipped with ORVR.

(g) Any gasoline dispensing facility that begins operation on or after the effective date of RIGL§23-23-30 shall be exempt from the Stage II vapor collection and control system requirements in Subsections 11.10.2.1 and 11.10.2.2. Such facilities shall be subject to the recordkeeping and reporting requirements specified in Subsection 11.10.3.10

(h) Any gasoline dispensing facility that begins operation on or after [insert the effective date of these amendments] shall not install a Stage II vapor collection and control system. Such facilities shall be subject to the recordkeeping and reporting requirements specified in Subsection 11.10.3.10. As specified in subsection 11.5.2.6(c), operation of a CARB-certified EVR Stage I vapor control system is required at such facilities upon startup.

(i) Upon Department verification and approval, on and after the effective date of RIGL§23-23-30, a gasoline dispensing facility may remove its Stage II vapor collection and control system from operation if excavation of one or more underground gasoline storage tanks at the facility is required in order to install or repair a below-ground component of the stage II vapor collection and control system or if the facility replaces fifty percent (50%) or more of its gasoline dispensers. On and after [insert the effective date of these amendments], compliance with the decommissioning specifications in Subsection 11.10.5, the recordkeeping and reporting requirements in Subsection 11.10.3.10 and the Stage I requirements in Section 11.5.2.6 and 11.5.2.7 shall constitute such department verification and approval.

(j) On and after [insert the effective date of these amendments], any gasoline dispensing facility may remove its Stage II vapor collection and control

system from operation, provided that the Stage II system is decommissioned according to the specifications in Subsection 11.10.5. Gasoline dispensing facilities that have decommissioned their Stage II systems shall be subject to the recordkeeping and reporting requirements in Subsection 11.10.3.10 and the Stage I requirements in Section 11.5.2.6 and 11.5.2.7. Any gasoline dispensing facility equipped with a Stage II vapor collection and control system must continue to operate the Stage II system according to the specifications in Subsections 11.10.2, 11.10.3 and 11.10.4 until that system is decommissioned according to the specifications in Section 11.10.5.

11.10.2 Prohibitions and Requirements

11.10.2.1 Any person who owns, leases, operates, or controls a gasoline dispensing facility, except those facilities meeting the specifications of Subsection 11.10.1(c), 11.10.(g) or 11.10.1(h), those facilities that meet the exemption criteria specified in Subsection 11.10.1(i) or 11.10.1(j), and those facilities that are granted an exemption by the Department pursuant to the provisions of Subsection 11.10.1(e), shall, according to the schedule provided in Subsection 11.10.4:

(a) Install, at each gasoline dispensing pump, a Stage II vapor collection and control system that has been certified by the California Air Resources Board (CARB) as having a minimum control efficiency of 95 percent by weight and make any modifications to the facility necessary to properly operate the system. All hoses in the system shall be coaxial. The system may include aftermarket parts, provided that those parts have been certified by CARB.

(b) All Stage II systems installed after 7 February 2001 must be certified according to CARB Vapor Recovery Certification Procedure CP-201, for underground storage tanks, or CP-205, for aboveground storage tanks, as adopted 12 April 1996, or by applicable certification procedures adopted by CARB subsequent to that date.

(c) All Stage II vapor and vent piping shall be made of a nonmetallic rigid type material unless the CARB certification for that Stage II system specifies that another type of piping may be used.

(d) Install pressure-vacuum (PV) vent valves on all Stage II systems. PV valve relief settings must be 3, plus or minus 0.5, inches of water column pressure and 8, plus or minus 2, inches water column vacuum, unless otherwise specified in the applicable CARB certification.

(e) Ensure that, prior to the initial operation of the Stage II vapor collection and control system, at least one facility representative has attended a Stage II training session applicable to the Stage II system in place at that facility which has been approved by the Director and by EPA. At all times, at least one person who has attended a Stage II training session applicable to the Stage II system in operation at the facility must be employed at the facility.

(f) Conspicuously post operating instructions for dispensing gasoline using the vapor collection and control system on the front of each gasoline dispensing pump. Such instructions must include a warning not to attempt continued refueling after initial automatic shutoff. Instructions shall also include the telephone number of the Department and a request that inoperative control devices be reported.

(g) Maintain the Stage II vapor collection and control system in proper operating condition as specified by the manufacturer and free of defects that would impair the effectiveness of the system, as defined by the state inspection criteria.

(h) Visually inspect all aboveground parts of the Stage II vapor collection and control system once a week. Such an inspection must, at a minimum, include checking for: missing components; slits and tears in nozzle boots; face cone defects; flattened, kinked or torn hoses; and faceplate defects which hinder contact with the fill inlet area.

(i) Remove from service any dispenser if:

(1) Any part of the Stage II vapor collection and control system associated with that dispenser fails a compliance test conducted by or ordered by the Department or is found to be defective during a Department inspection, or

(2) Any part of the Stage II vapor collection and control system associated with that dispenser is not operating properly, or

(3) Any part of the Stage II vapor collection and control system associated with that dispenser is found to be defective during a visual inspection performed in accordance with Subsection 11.10.2.1(h).

If the defect is in a single hose or nozzle on a multiproduct dispenser, only the nozzle associated with the defect must be removed from service.

Any dispenser removed from service on the basis of test results shall be kept out of service until it has been demonstrated by retesting that the dispenser is in compliance. Any dispenser removed from service in accordance with any other provision of this subsection shall be kept out of service until all defective or missing parts of the Stage II vapor collection and control system associated with the dispenser have been repaired or replaced.

11.10.2.2 Except as provided in Subsection 11.10.1, no person, owner, operator, or employee of a gasoline dispensing facility shall dispense or allow the dispensing of gasoline from a stationary storage vessel into any motor vehicle fuel tank unless that gasoline dispenser is equipped with a properly operating Stage II vapor collection and control system certified by the California Air Resources Board and that system has been determined to be installed correctly according to the tests specified in Subsection 11.10.3.3. Stage II systems that were certified according to a CARB certification procedure adopted after 12 April 1996 must be operated in accordance with the provisions of the applicable certification, including Enhanced Vapor Recovery provisions, if applicable.

11.10.2.3 Except as specified in Subsection 11.10.2.4, Stage II vapor collection and control systems at all gasoline dispensing facilities must be decommissioned according to the procedures specified in Subsection 11.10.5 by December 22, 2017.

11.10.2.4 The owner or operator of a gasoline dispensing facility that is equipped with a Stage II vapor balance system or with a Stage II

vacuum assist system that is compatible with onboard refueling vapor recovery systems may apply for an exemption to the Stage II system removal requirement in Subsection 11.10.2.3. Such application must be received by the Department by October 22, 2017 and shall include the name of the owner/operator of the facility, the number of tanks and dispensers at the facility, and the type of Stage II system in place at the facility. If the exemption is granted, the gasoline dispensing facility must continue to operate the Stage II system according to the specifications in Subsections 11.10.2, 11.10.3 and 11.10.4 until that system is decommissioned according to the specifications in Section 11.10.5.

11.10.3 Testing, Recordkeeping and Reporting Requirements

11.10.3.1 On or before 15 November 1992 and when requested by the Department, the owner or operator of any gasoline dispensing facility shall report the following information to the Department in writing:

(a) Name and address of the facility,

(b) Name and address of owner or operator or other responsible individual,

(c) Number of nozzles used to dispense gasoline at the facility, and

(d) Monthly throughput for each of the previous 12 months.

11.10.3.2 At least thirty (30) days prior to the installation of a Stage II system, the person who owns, operates, leases, or controls the gasoline dispensing facility shall notify the Department in writing of the expected date of initiation of installation of the underground piping and of the type and manufacturer of the Stage II equipment. Such notification shall not be deemed to be an approval by the Department of the equipment being installed, or as compliance with the requirements of this section.

11.10.3.3 The following tests must be conducted on any Stage II vapor collection and control system prior to initial operation of the system:

(a) A Leak Test;

(b) A Liquid Blockage Test, which must be performed on every nozzle on the Stage II system;

(c) A Vapor Space Tie Test;

(d) A Ten Gallon per Minute Test;

(e) A Pressure Vacuum Vent Cap Test:

(f) For vacuum assist Stage II systems, an Air to Liquid Ratio (A/L) Test, which must be performed on every nozzle on the Stage II system. If more than one product is dispensed through a single nozzle, A/L testing must be performed on that nozzle for each product dispensed; and

(g) All additional tests specified in the CARB certification applicable to that Stage II system

11.10.3.4 The function of all Stage II vapor collection and control systems shall be retested prior to operation of the system after any major system modification. Testing shall include all tests listed in Subsection 11.10.3.3. A major system modification is considered to be the occurrence of any one of the following:

(a) A modification which would cause the facility to be a substantially modified gasoline dispensing facility, as defined in Subsection 11.1.21 of this regulation,

(b) The repair or replacement of any part of an underground piping system attached to a stationary storage tank equipped with a Stage II system, excluding repairs which occur without excavation, or

(c) The change from one certified Stage II system configuration to another.

11.10.3.5 The function of all Stage II vapor collection and control systems shall be retested periodically according to the following schedule:

(a) A Leak test, a Vapor Space Tie Test, a Pressure Vacuum Vent Cap Test and a Ten Gallon per Minute Test shall be performed annually;

(b) A Liquid Blockage Test shall be performed once every

three years on every nozzle on the Stage II system;

(c) An Air to Liquid Ratio Test shall be performed annually on all vacuum assist systems; and

(d) All other tests required in the CARB certification applicable to that Stage II system shall be performed according to the frequency specified in that certification.

11.10.3.6 The Department may require a retest of the system any time that an inspection indicates that the vapor collection and control system may not be functioning properly.

11.10.3.7 The owner or operator of a facility shall notify the Department of the date that testing will be conducted at least seven (7) days in advance of testing and shall certify to the Department in writing within 15 days of the test that testing has been completed. Such certification shall be signed by the owner or operator of the facility and shall include the date of installation of the Stage II vapor collection and control system and the results of the tests required in this section. Test results shall be signed and certified as accurate by the person who conducted the tests.

11.10.3.8 Leak, Liquid Blockage, and Vapor Space Tie Tests performed pursuant to the requirements of this section shall use the methodology specified in EPA's Technical Guidance - Stage II Vapor Recovery Systems for Control of Vehicle Refueling of Gasoline Dispensing Facilities, Volumes I and II, November 1991. Ten Gallon Per Minute Tests, Air to Liquid Ratio Tests, Pressure Vacuum Vent Cap Tests and any additional tests required by the applicable CARB certification shall be performed using the current CARB methodology for those tests, unless otherwise specified by the Director.

11.10.3.9 The following records shall be maintained for a period of five years (unless otherwise noted) and shall be made available for inspection by representatives of the Department or the EPA on request:

(a) Dates and results of weekly visual inspections as required in Subsection 11.10.2.1(e),

(b) Date that any gasoline dispenser is removed from operation in compliance with the requirements specified in

Subsection 11.10.2.1(f) and date that dispenser is returned to service,

(c) Identification of parts of the Stage II vapor collection and control system that are repaired or replaced, and dates of such replacements,

(d) Identification of any tests performed and the dates and results of such tests, and

(e) Proof of attendance and completion of training, as specified in Subsection 11.10.2.1 (b) for each employee who has received Stage II training. Such documentation shall be maintained as long as the employee continues to be employed by the facility.

Records maintained pursuant to Subsections 11.10.3.8 (a), (b) and (c) for the two most current years shall be kept at the facility. All other records specified in this subsection shall be kept either at the facility or at a centralized location approved by the Department.

11.10.3.10 Any facility exempted from this section according to the provisions of Subsection 11.10.1 or Subsection 11.10.1(e), ~~or~~ (f), (g) or (h) shall maintain records at the facility documenting monthly throughput of gasoline at the facility and shall make those records available for inspection by representatives of the Department or the EPA on request. Documentation shall include dates and quantities of gasoline delivered and monthly records of the quantity of gasoline dispensed. All records shall be maintained for a period of five (5) years.

11.10.4 Compliance Schedule

11.10.4.1 All gasoline dispensing facilities subject to this section, as identified in Subsection 11.10.1, must comply with the provisions of Subsection 11.10.2 according to the following schedule:

(a) All gasoline dispensing facilities constructed or substantially modified on or after 15 November 1992 shall comply before commencing operation.

(b) All gasoline dispensing facilities constructed or substantially modified after 15 November 1990 but before

15 November 1992 shall comply by 15 May 1993.

(c) All gasoline dispensing facilities not enumerated in (a) or (b) above which had a throughput of gasoline of 100,000 gallons or more in any month after November 1991 shall comply by 15 November 1993.

(d) All gasoline dispensing facilities not enumerated in (a), (b), or (c) above which had a throughput of gasoline of 50,000 gallons or more in any month after November 1991 shall comply by 15 May 1994.

(e) All other gasoline dispensing facilities subject to this section shall comply by 15 November 1994.

(f) Any gasoline dispensing facility which is initially exempt from this section because the monthly gasoline throughput at that facility did not exceed 10,000 gallons in any month between November 1991 and 15 November 1992 which subsequently has a throughput in excess of 10,000 gallons in any month must comply with the provisions of this section within 6 months of exceeding the 10,000 gallon threshold or by 15 November 1994, whichever is later.

11.10.5 **Stage II Decommissioning Requirements**

11.10.5.1 The owner or operator of a gasoline dispensing facility shall notify the Department of the date that decommissioning of the Stage II vapor collection and control system at that facility will occur at least seven (7) days in advance of beginning the decommissioning process. The notification must include the following information:

(a) Name and address of the facility,

(b) Name and address of owner or operator or other responsible individual,

(c) Date that decommissioning will begin,

(d) Whether the tank top will be accessible during decommissioning,

(e) A certification that decommissioning will be conducted according to the procedures specified in Subsection

11.10.5.2.

11.10.5.2 Decommissioning of Stage II vapor collection and control systems shall be conducted according to the decommissioning procedures specified in Section 14 of the Petroleum Equipment Institute (PEI) "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at vehicle Fueling Sites" (PEI/RP300-09). Those practices address the following activities:

(a) Safety procedures (14.6.1 of the PEI document),

(b) Relief of pressure in the tank ullage (14.6.2),

(c) Draining liquid collection points (14.6.3),

(d) For vacuum-assist Stage II systems, electrical and mechanical disconnection of vapor pumping and processing units, disconnection of all electrical components, and reprogramming of the dispenser electronics (14.6.4 and 14.6.5)

(e) Isolating below-grade vapor piping at the base of the dispenser (14.6.6)

(f) Disconnecting vapor piping at the tank top (14.6.7)

(e) Sealing the dispenser cabinet vapor piping (14.6.8)

(f) Replacing hanging hardware (14.6.9)

(g) Replacing pressure/vacuum vent valves (14.6.10)

(h) Removing Stage II operating instructions from the dispensers (14.6.11)

(i) Testing procedures (14.6.12)

(j) Final Visual Check (14.6.13) and

(k) Documentation (14.6.14)

11.10.5.3 If excavation would be required to access the vapor piping connection at the tank top, disconnecting and capping the vapor piping at the tank top is not required at the time that the Stage II

system is decommissioned. However, the vapor recovery piping must be disconnected and capped at the tank top the first time that the vapor piping-tank top connection is exposed for any reason.

11,10.5.4 The following tests must be conducted and passed before the gasoline dispensing facility is returned to operation after decommissioning the Stage II system:

(a) A Pressure Decay 2-inch Test, using CARB test procedure TP-201.3;

(b) A Vapor Tie Test, using the San Diego Air Pollution Control District test procedure TP-96-1, section 5.1.9;

(c) A Pressure/Vacuum Vent Valve Test, using CARB test procedure TP-201.1E;

(d) For facilities with EVR rotatable product adaptors and vapor adaptors, a Static Torque Rotatable Adaptor Test, using CARB test procedure 201.1B; and

(e) For facilities equipped with a EVR Stage I vapor control system, either a Leak Rate or Drop Tube/Drain Valve Assembly Test, using CARB test procedure 201.1C, or a Leak Rate of Drop Tube/Overfill Prevention Devised test, using CARB test procedure 201.1D.

11.10.5.5 The owner or operator of a gasoline dispensing facility shall certify to the Department in writing within 30 days of decommissioning a Stage II system that decommissioning has been completed. Such certification shall include the date of decommissioning, a statement signed by the owner or operator of the facility that decommissioning was conducted according to the PEI specifications sited in subsection 11.10.5.2, and the date and results of the tests specified in subsection 11.10.5.4. Test results shall be signed and certified as accurate by the person who conducted the tests.

11.11 General Provisions

11.11.1 Purpose

The purpose of this regulation is to regulate the storage and marketing of petroleum liquids to minimize emissions of volatile organic compounds.

11.11.2 Authority

These regulations are authorized pursuant to R.I. Gen. Laws § 42-17.1-2(s) and 23-23, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35

11.11.3 Application

The terms and provisions of this regulation shall be liberally construed to permit the Department to effectuate the purposes of state law, goals and policies.

11.11.4 Severability

If any provision of this regulation or the application thereof to any person or circumstance, is held invalid by a court of competent jurisdiction, the validity of the remainder of the regulation shall not be affected thereby.

11.11.5 Effective Date

The foregoing regulation, "Petroleum Liquids Marketing and Storage", as amended, after due notice, is hereby adopted and filed with the Secretary of State this ~~19th~~ day of ~~September, 2008~~ to become effective twenty (20) days thereafter, in accordance with the provisions of Chapters 23-23, 42-35, 42-17.1, 42-17.6, of the General Laws of Rhode Island of 1956, as amended.

Notice Given on: ~~July 8,~~ 2008 September 30, 2013

Public Hearing held: ~~August 8, 2008~~ October 30, 2013

Filing Date: ~~September 19, 2008~~

Effective Date: ~~October 9, 2008~~

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

Rhode Island Stage II Vapor Control Program Discontinuation State Implementation Plan Revision

Posted for Public Review on September 30, 2013

Submitted to the EPA on

1. Introduction

Section 182(b)(3) of the federal Clean Air Act Amendments of 1990 (CAA) required states with moderate and higher ozone nonattainment areas to revise their State Implementation Plans (SIPs) to require "owners or operators of gasoline dispensing systems to install and operate….. a system for gasoline vapor recovery of emissions from the fueling of motor vehicles." In addition, Section 184(b)(2) of the CAA required the Administrator of the United States Environmental Protection Agency (EPA) to identify "control measures capable of achieving emission reductions comparable to those achievable through vehicle refueling controls" and for states that are in the Ozone Transport Region (OTR) to adopt "such [comparable] measures or such vehicle refueling controls."

Since Rhode Island is part of the OTR and was a serious nonattainment area for the then-current one-hour ozone NAAQS, the State was subject to both of the above sections. In 1992, to comply with those provisions, the Rhode Island Department of Environmental Management (RI DEM) amended Rhode Island Air Pollution Control Regulation (RIAPCR) No. 11, "Petroleum Liquids Marketing and Storage" to require gasoline dispensing facilities (GDFs) to "install, at each gasoline dispensing pump, a Stage II vapor collection and control system that has been certified by the California Air Resources Board (CARB) as having a minimum control efficiency of 95 percent."

On a parallel track, Section 202(a)(6) of the CAA required EPA to promulgate standards requiring new light-duty vehicles to be equipped with onboard refueling vapor recovery (ORVR) systems according to a specified phase-in schedule. Since ORVR systems, like Stage II vapor control systems, reduce emissions associated with refueling vehicles, Stage II controls are redundant for vehicles equipped with ORVR. Therefore, that section of the CAA further stipulates that "the Administrator may, by rule, revise or waive the application of the [Stage II] requirements … for areas classified … as Serious, Severe, or Extreme for ozone, as appropriate, after such time as the Administrator determines that onboard emissions control systems required under this paragraph are in widespread use throughout the motor vehicle fleet."

On May 16, 2012, the EPA issued a final rule (77 FR 28772) determining that ORVR is now in widespread use in the motor vehicle fleet nationwide. EPA based that determination on an analysis that demonstrated that, nationwide, more than 75 percent of highway gasoline is dispensed into ORVR-equipped vehicles, rendering Stage II controls largely redundant. In areas, like Rhode Island, where most GDFs are equipped with vacuum-assist Stage II control systems that are not compatible with ORVR systems, the emissions reductions benefits associated with Stage II programs are further reduced. The EPA analysis also showed that the emissions reduction benefits associated with Stage II programs will continue to decrease in future years as older vehicles are replaced by newer, ORVR- equipped, models.

In the May 16, 2012 rule, the EPA exercised its authority under Section 202(a)(6) to waive Section182(b)(3) Stage II gasoline vapor recovery requirements at GDFs

nationwide. States may submit SIP revisions that, once approved by EPA, would eliminate those states' Stage II obligations under that section. The rule did not, however, relieve OTR states from the Section 184(b)(2) requirement that OTR states implement Stage II controls or measures that achieve emissions reductions comparable to those that would be achieved by a Stage II program. Therefore, a Rhode Island SIP revision removing Stage II requirements from RIACPR No. 11 must include a demonstration that measures are in place that will reduce Rhode Island's emissions by an amount comparable to the emissions reductions currently achieved by the Stage II program in the State.

Additionally, Section 110(l) of the CAA, entitled "Plan Revisions," states that "(t)he Administrator [of EPA] shall not approve a revision of a [SIP] plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress." On 30 April 2008, RI DEM submitted the "Rhode Island Attainment Plan for the 8-Hour Ozone National Ambient Air Quality Standard" to the EPA as a revision of the Rhode Island SIP. That attainment plan included several elements, including a demonstration that Rhode Island would attain the 1997 8-hour National Ambient Air Quality Standard (NAAQS) for ozone, 0.08 ppm, by the end of the 2009 ozone season and a reasonable further progress (RFP) analysis demonstrating that emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) in the State would be reduced by at least 15% by 2008, as required by the CAA. Emissions reductions associated with the State's Stage II program were included in the attainment and RFP analyses.

Ozone levels monitored in Rhode Island have been in attainment of the 1997 ozone NAAQS since 2008. However, the EPA promulgated a more stringent 8-hour ozone NAAQS, 0.075 ppm, in March 2008. In April 2012, the entire State of Rhode Island was designated unclassifiable/attainment for that NAAQS, based on 2009-2011 monitoring data. However, in the most recent three year period, 2010-2012, monitored ozone levels at the Narragansett, Rhode Island site exceeded the 2008 ozone NAAQS.

Therefore, although EPA's May 2012 rule waived Section182(b)(3) Stage II requirements by determining that ORVR is in widespread use nationwide, the following elements must be included in a SIP revision discontinuing the Rhode Island Stage II program:

- A demonstration that Rhode Island will achieve emissions reductions comparable to those that would be realized if the Stage II program remained in place, as required by Section 184(b)(2) of the CAA;

- A demonstration that emissions increases associated with the discontinuation of the Stage II program will not result in the inability of the State to comply with the RFP commitment specified in the 30 April 2008 ozone attainment SIP submittal, as required by Section 110(1); and

- A demonstration that emissions increases associated with the discontinuation of the Stage II program will not contribute to violations of the 1997 or 2008 ozone NAAQS, as required by Section 110(1).

This document will serve as a demonstration that the discontinuation of the Rhode Island Stage II program is consistent with the above Section 184(b)(2) and Section 110(l) requirements.

2. Section 184(b)(2) Comparable Measures Demonstration

On 7 August 2012, the EPA released a document entitled "Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures."[1] In that guidance document, EPA noted that Section 184(b)(2) of the CAA requires OTR states to implement measures that achieve emissions reductions that are comparable, but not necessarily equivalent, to those that would be achieved with a Stage II control program and that "(n)ow that ORVR is in widespread use in the motor vehicle fleet, the EPA believes it may be appropriate for states to demonstrate that the comparable measures requirement is satisfied if phasing out a Stage II control program in a particular area is estimated to have no, **or a *de minimis***, incremental loss of area-wide emissions control." The guidance document goes on to say that "EPA believes it is reasonable to conclude that the incremental emissions control that Stage II achieves beyond ORVR is *de minimis* if it is **less than 10 percent of the area-wide emissions inventory associated with refueling highway motor vehicles**."

The guidance document presents a procedure that can be used to determine whether incremental emissions reduction benefits from a state's Stage II program are *de minimis* and thus fulfill the comparable measure requirement in Section 184(b)(2). The following is an assessment of Rhode Island's comparable measures status using those procedures. Note that the EPA guidance document states that, "(f)or the purposes of addressing comparability under CAA section 184(b)(2), states only need to consider the reductions achievable by the minimum program required by CAA section 182(b)(3)," even if the Stage II program adopted by a state is nominally more stringent than those minimum requirements. However, to more fully assess the potential impact of discontinuing the program, RI DEM used factors reflective of the actual Rhode Island program rather than those associated with the minimum program, as well as other conservative assumptions, where appropriate, in its analysis.

In the procedure specified in the guidance, the incremental loss in emission reductions associated with removing Stage II requirements is calculated using Equation 1:

[1] US EPA, OAQPS, "Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures," 7 August 2012, EPA-457/B-12-001. http://www.epa.gov/glo/pdfs/20120807guidance.pdf

Equation 1

$$Increment_i = (Q_{SII})(1-Q_{ORVRi})(\eta_{iuSII}) - (Q_{SIIva})(CF_i)$$

Where:

$Increment_i$ is the potential loss of emission reductions in year *i* associated with removing Stage II, as a fraction of refueling emissions. Increment is expressed as a fraction of 1.

Q_{SII} is the fraction of highway gasoline throughput in the State that is dispensed through dispensers equipped with Stage II equipment, expressed as a fraction of 1. The typical range of Q_{SII} values identified by the EPA for an area, like Rhode Island, with a 10,000 gallon per month (gpm) exemption criterion for all GDFs is 0.95 - 0.97. Note that the default Q_{SII} for areas with exemption criteria consistent with the minimum CAA requirements, 10,000 gpm for private GDFs and 50,000 gpm for independent small business marketers, is 0.9. RI DEM used a conservative value of 0.97 for Q_{SII} in its calculations.

Q_{ORVRi} is the fraction of annual gallons of highway motor gasoline in year *i* dispensed to ORVR-equipped vehicles: The value of this parameter, which is expressed as a fraction of 1, varies by state/area depending on the fleet turnover/scrappage rate, annual vehicle miles traveled (VMT), and fuel economy of the vehicles involved in the analysis.

EPA's projected nationwide ORVR penetration fractions are shown in Table 1.

Table 1 - Projected ORVR Penetration in the National Gasoline Fueled Vehicle Fleet by Year (from EPA guidance document)

End of Year	Fraction of Vehicle Population	Fraction of VMT	Fraction of Gasoline Dispensed (Q_{ORVR})
2012	0.714	0.800	0.777
2013	0.753	0.834	0.810
2014	0.787	0.863	0.840
2015	0.818	0.888	0.865
2016	0.845	0.909	0.886
2017	0.868	0.925	0.903
2018	0.888	0.939	0.919
2019	0.905	0.950	0.932
2020	0.920	0.959	0.943

To develop Rhode Island-specific ORVR penetration numbers, RI DEM obtained vehicle registration data by model year and vehicle class from the RI Division of Motor Vehicles (RI DMV). These data are known to be somewhat flawed (e.g. misclassification of certain types of vehicles) but are the only state-specific data available to RI DEM at this time.

Using the RI DMV data generated for two dates, December 4, 2012 and June 2, 2013, RI DEM calculated the percentage of ORVR vehicles in the gasoline-powered highway fleet, assuming ORVR phase-in according to the EPA mandated schedule, shown in Table 2:

Table 2 – Mandated ORVR Phase-in Schedule by Vehicle Type (Model Year)

	40% of Fleet	80% of Fleet	100% of Fleet
Light Duty Gasoline Vehicles (LDGV)	1998	1999	2000
Light Duty Gasoline Trucks ≤ 6000 lbs (LDGT1)	2001	2002	2003
Light Duty Gasoline Trucks > 6000 lbs (LDGT2 & 3)	2004	2005	2006

The fractions of gasoline vehicles in Rhode Island equipped with ORVR, calculated from the RI DMV data and the above phase-in schedule, were 0.731 (73.1%) for December 4, 2012 and 0.742 (74.2%) for June 2, 2013 (see calculation spreadsheet attached as Appendix A).

The calculated Rhode Island ORVR vehicle penetration rates are slightly ahead of the EPA nationwide numbers listed in Table 1 above, 0.714 (71.4%) at the end of 2012 and 0.730 (73.0%) (interpolated value) at the beginning of June 2013. However, given the uncertainty of the RI DMV data, RI DEM decided to use the EPA nationwide numbers instead of the state-specific values for ORVR penetration in its analysis. In a June 25, 2013 communication, EPA Region 1 concurred with that decision.

η_{iuSII} is the Stage II in-use control efficiency, the best estimate of the current average in-use control efficiency for Stage II vapor recovery systems in the state/area for vehicles that are not equipped with ORVR, expressed as a fraction of 1. This value considers vapor capture at the vehicle fillpipe opening as well as transmittal to and storage in the storage tank. According to the EPA guidance, η_{iuSII} values are typically in the range of 0.60 – 0.75 (60 – 75%) and depend on GDF operators' compliance with the inspection, testing, and maintenance activities specified in the state's implementing regulations and the frequency of inspection and follow-on enforcement actions by state/local authorities in implementing the regulations. Rhode Island GDFs are required to conduct Stage II tests annually and to submit the test results to RI DEM. Test results are reviewed but, at the present, due to resource limitations, a minimal number of tests are observed by RI DEM staff and no additional GDF inspections are conducted. The tests rarely identify catastrophic failures, but adjustments are required at the majority of the GDFs for systems to pass the required tests. Therefore, the in-use control efficiency in Rhode Island is likely to be in the middle of the range identified by EPA; to be conservative, RI DEM will use a value of 0.70 (70%) for this parameter in its analysis.

Q_{SIIva} is the fraction of annual highway gasoline consumption in the state/area dispensed through vacuum-assist type Stage II systems, expressed as a fraction of 1. This fraction does not include gasoline delivered to vehicles through dispensers with traditional nozzles, balance-type Stage II nozzles, or ORVR-compatible Stage II nozzles. The EPA guidance estimates the Q_{SIIva} for Rhode Island as 0.93. Based on a survey of 2011

throughput of GDFs in Rhode Island, RI DEM calculated a Rhode Island Q_{SIIva} of 0.91; RI DEM will use a Q_{SIIva} of 0.91 in the analysis, since that value is more conservative than the value in the guidance.

CF_i is the compatibility factor, the increase in underground storage tank vent pipe emissions over the normal breathing/emptying loss emissions in year *i* associated with Stage II-ORVR incompatibility. CF_i is a function of the fraction of gasoline dispensed to ORVR vehicles in year *i*, the design features of the traditional vacuum assist Stage II nozzles, and the distribution of vacuum assist Stage II GDFs with various Air/Liquid ratios. The EPA guidance suggests calculating CF_i as the product of Q_{ORVRi} and the constant term 0.0777. GDFs with vapor balance systems or with ORVR compatible nozzles do not experience this incompatibility.

Using Equation 1, above, the increments for 2013 and 2016 for Rhode Island were calculated as follows:

$$\text{Increment}_{2013} = (Q_{SII})(1-Q_{ORVR2013})(\eta_{iuSII}) - (Q_{SIIva})(CF_{2013})$$

$$= (Q_{SII})(1-Q_{ORVR2013})(\eta_{iuSII}) - (Q_{SIIva})(0.0777 * Q_{ORVR2013})$$

$$= (0.97)*(1-0.810)*(0.70) – (0.91)*(0.0777*0.810)$$

$$= 0.129 – 0.057 = \mathbf{0.072}$$

$$\text{Increment}_{2016} = (Q_{SII})(1-Q_{ORVR2016})(\eta_{iuSII}) - (Q_{SIIva})(CF_{2016})$$

$$= (Q_{SII})(1-Q_{ORVR2016})(\eta_{iuSII}) - (Q_{SIIva})(0.0777 * Q_{ORVR2016})$$

$$= (0.97)*(1-0.886)*(0.70) – (0.91)*(0.0777*0.886)$$

$$= 0.077 – 0.063 = \mathbf{0.015}$$

Therefore, the EPA procedure estimates that, at the end of 2013, the Rhode Island Stage II program would reduce refueling emissions by 7.2% more than the reductions associated with ORVR alone. That increment is less than 10% and thus would be considered *de minimis* according to the EPA guidance, thus fulfilling the comparable measures requirement. At the end of 2016, Stage II will provide a benefit of only 1.5%

When the increment is zero, the Stage II program will no longer provide a net emissions reduction benefit. The increment will be zero when:

$$(Q_{SII})(1-Q_{ORVRi})(\eta_{iuSII}) = (Q_{SIIva})(CF_i)$$

$$(Q_{SII})(1-Q_{ORVRi})(\eta_{iuSII}) = (Q_{SIIva})(0.0777 * Q_{ORVRi})$$
$$(Q_{SII})(\eta_{iuSII}) – (Q_{ORVRi})(Q_{SII})(\eta_{iuSII}) = (Q_{ORVRi})(0.0777\ Q_{SIIva})$$

$$(Q_{SII})(\eta_{iuSII}) = (Q_{ORVRi})(\ 0.0777\ Q_{SIIva}) + (Q_{ORVRi})(Q_{SII})(\eta_{iuSII})$$

$$Q_{ORVRi} = (Q_{SII})(\eta_{iuSII})\ /((\ 0.0777\ Q_{SIIva}) + (Q_{SII})(\eta_{iuSII}))$$

$$= (0.97*0.70)/((0.0777\ *0.91) + (0.97*\ 0.70))$$

$$= (0.679)/(0.071 + 0.679) = 0.906$$

Using the projections for Q_{ORVRi} in Table 1 above, Q_{ORVRi} will be 0.906, and thus the increment will be zero, in early 2018. After that time, the EPA methodology predicts that continued implementation of the Rhode Island Stage II program would result in a net increase in VOC refueling emissions, due to increased emissions associated with Stage II-ORVR incompatibility at stations with vapor assist systems.

3. Section 110(l) Noninterference Demonstration

The EPA guidance also provides methodology for determining whether removal of Stage II would significantly interfere with NAAQS attainment and RFP provisions, as required by Section 110(l) of the CAA. The increase in VOC emissions associated with removal of Stage II controls is calculated using Equation 2:

Equation 2

$$\text{Incremental Emissions}_i = (Increment_i)(GC_i)(EF)$$

Where:

Incremental Emissions$_i$ is the increase in VOC emissions, in tons, in all of part of year *i* associated with removal of Stage II controls.

Increment$_i$ is the increment percentage impact of removing Stage II in year *i*, as fraction of the refueling inventory, calculated using Equation 1, above.

GC$_i$ is the projected gasoline consumption, in gallons, for the time period and state/area of interest. The EPA guidance recommends use of Federal Highway Administration (FHWA) gasoline consumption data.[2] That source provides past gasoline consumption data by state and month. The Rhode Island gasoline consumption data for 2011, the most recent year for which the FHWA data are available, are shown in Table 3. Note that average daily consumption is higher in the summer than in the other months of the year.

Table 3 - Rhode Island 2011 Gasoline Consumption (from FHWA report)

	Total gal	**Average gal/day**
Entire Year	376,115,661	1,030,454
May - September	162,425,415	1,061,604
July - August	68,392,203	1,103,100

[2] DoT FHWA Highway Statistics; table entitled "Monthly gasoline reported by States" http://www.fhwa.dot.gov/policyinformation/statistics/2011/33ga.cfm

The EPA guidance states that future year gasoline consumption can be projected using growth rates derived from the U.S. Department of Energy's (DoE's) national annual forecasts of future motor gasoline consumption.[3] National growth factors calculated from those data are shown in Table 4:

Table 4 - Growth Factors Calculated from DoE Projections of National Consumption of Motor Gasoline

	National Consumption (Mill barrels/day)	Growth Factor from 2011
2011	8.744316	1
2012	8.731300	0.998511
2013	8.728016	0.998136
2014	8.604835	0.984049
2015	8.555319	0.978386
2016	8.517118	0.974018
2017	8.475888	0.969303
2018	8.434881	0.964613
2019	8.383984	0.958792
2020	8.337276	0.953451
2021	8.234661	0.941716

Rhode Island total and average daily gasoline consumption for the years 2011 – 2021, calculated using the FHWA 2011 Rhode Island gasoline consumption data in Table 3 and the growth factors derived above from the DoE national motor gasoline consumption forecasts in Table 4, are shown in Table 5:

[3] Motor gasoline projection from the 2013 Department of Energy EIA Annual Energy Outlook (AEO); table entitled "Liquid Fuels Supply and Distribution - Reference Case." http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=0-AEO2013&table=11-AEO2013&region=0-0&cases=ref2013-d102312a

Table 5 – Projected Future Year Gasoline Consumption (GC) in Rhode Island

	Annual gal/yr	Annual gal/day	May-Sep total gal	May-Sep gal/day	Jul-Aug total gal	Jul-Aug gal/day
2011	376,115,661	1,030,454	162,425,415	1,061,604	68,392,203	1,103,100
2012	375,555,625	1,028,920	162,183,564	1,060,023	68,290,367	1,101,458
2013	375,414,581	1,028,533	162,122,654	1,059,625	68,264,720	1,101,044
2014	370,116,240	1,014,017	159,834,567	1,044,670	67,301,279	1,085,504
2015	367,986,297	1,008,182	158,914,752	1,038,659	66,913,974	1,079,258
2016	366,343,424	1,003,681	158,205,278	1,034,021	66,615,237	1,074,439
2017	364,570,039	998,822	157,439,442	1,029,016	66,292,768	1,069,238
2018	362,806,056	993,989	156,677,667	1,024,037	65,972,008	1,064,065
2019	360,616,687	987,991	155,732,188	1,017,857	65,573,897	1,057,644
2020	358,607,853	982,487	154,864,674	1,012,187	65,208,614	1,051,752
2021	354,194,136	970,395	152,958,612	999,729	64,406,032	1,038,807

EF is the uncontrolled displacement refueling emission factor in grams/gallon (g/gal). The magnitude of this factor is a function of the gasoline Reid vapor pressure (RVP), dispensed fuel temperature (T_d), and the difference between tank fuel temperature and the dispensed fuel temperature (ΔT). The EPA guidance recommends using Equation 3, which was used in EPA's widespread use analysis, to calculate EF:

Equation 3

$$EF \text{ (g/gal)} = \exp[-1.2798 - 0.0049(\Delta T) + 0.0203(T_d) + 0.1315(RVP)]$$

Values for ΔT, T_d and RVP in Rhode Island, as listed in the EPA guidance, are shown in Table 6. Note that both T_d and ΔT are higher in the summer than in the cooler months.

Table 6 Input Values for Calculating the Uncontrolled Refueling Emissions Factor

	ΔT	T_d	RVP
Annual	5.7	61	7
May - September	11.5	74	7
July - August	12.5	78	7

EF would therefore be calculated as follows:

Year round: $EF \text{ (g/gal)} = \exp[-1.2798 - 0.0049(5.7) + 0.0203(61) + 0.1315(7)] = 2.3$ g/gal

May – Sept: $EF \text{ (g/gal)} = \exp[-1.2798 - 0.0049(11.5) + 0.0203(74) + 0.1315(7)] = 3.0$ g/gal

July – Aug: $EF \text{ (g/gal)} = \exp[-1.2798 - 0.0049(12.5) + 0.0203(78) + 0.1315(7)] = 3.2$ g/gal

And the Incremental Emissions, in tons, associated with removal of Stage II would be calculated as:

2013

$$\text{Incremental Emissions}_{2013} = (Increment_{2013})(GC_{2013})(EF)$$

Total increased yearly emissions:
= 0.072 * 375,414,581 gal/year * 2.3 g/gal *1 lb/453.6g * 1 ton/2000 lb
= 69 tons/year

Incremental emissions per day for May - September (5-month ozone season):
= 0.072* 1,059,625 gal/day * 3.0 g/gal *1 lb/453.6g * 1 ton/2000 lb
=0.25 tons/day (505 lbs/day)

Incremental emissions per day for July – August (maximum daily emissions):
=0.072* 1,101,044 gal/day * 3.2 g/gal *1 lb/453.6g * 1 ton/2000 lb
=0.28 tons/day (559 lbs/day)

2016

$$\text{Incremental Emissions}_{2016} = (Increment_{2016})(GC_{2016})(EF)$$

Total incremental yearly emissions:
= 0.015 * 366,343,424 gal/year * 2.3 g/gal *1 lb/453.6g * 1 ton/2000 lb
= 14 tons/year

Incremental emissions per day for May - September (5-month ozone season):
= 0.015* 1,034,021 gal/day * 3.0 g/gal *1 lb/453.6g * 1 ton/2000 lb
= 0.051 tons/day (103 lbs/day)

Incremental emissions per day for July – August (maximum daily emissions):
=0.015* 1,074,439 gal/day * 3.2 g/gal *1 lb/453.6g * 1 ton/2000 lb
=0.057 tons/day (114 lbs/day)

As discussed above, to comply with the requirements in Section 110(l) of the CAA, Rhode Island must demonstrate that:

- The emissions increases associated with the discontinuation of the Stage II program will not interfere with compliance with the RFP commitment in the 2008 ozone attainment demonstration SIP; and

- The emissions increases associated with the discontinuation of the Stage II program will not contribute to violations of the 1997 or 2008 ozone NAAQS.

The RFP commitment was based on an emissions inventory for calendar year 2002 that was projected to calendar year 2008. The anthropogenic VOC emissions for 2002 and 2008 in that emissions inventory are shown in Table 7. As shown in that table, the incremental emissions associated with the discontinuation of the Rhode Island Stage II program for 2013 and 2016 represent 0.2 – 0.3% and 0.03 - 0.05% , respectively, of the anthropogenic VOC emissions inventories prepared for the RFP analyses. Therefore, any effect on the RFP commitments associated with removing the Stage II program would be minimal.

The 2008 attainment plan also included a regional photochemical modeling analysis which demonstrated that Rhode Island would attain the 1997 ozone NAAQS by 2009. That modeling analysis used a regionally-prepared projected 2009 emissions inventory. As shown in Table 7, the incremental emissions associated with discontinuation of the Rhode Island Stage II program in 2013 represents 0.15% of the modeling inventory and the increase in emissions in 2016 is 0.03% of the modeling inventory. Therefore, removal of the Stage II program would not significantly impact the modeling results.

Rhode Island is not required to prepare an attainment demonstration for the 2008 ozone NAAQS because the State is designated as unclassifiable/attainment for that standard. However, to comply with EPA's Consolidated Emissions Reporting Rule, Rhode Island, in conjunction with the EPA, prepared a comprehensive emissions inventory for 2011. Those emissions estimates are not yet final, but the total anthropogenic VOC emissions in that inventory, as of July 2013, are presented in Table 7. As shown in that table, the annual incremental emissions associated with the discontinuation of the Rhode Island Stage II program in 2013 and 2016 are 0.40% and 0.081% of that inventory, respectively.

Since the incremental emissions associated with the discontinuation of the Stage II program represent 0.15 – 0.40% and 0.031 – 0.081% of the relevant anthropogenic VOC emissions inventories in 2013 and 2016, respectively, it is clear that the removal of those requirements will not interfere with RFP commitments of with attainment of the NAAQS in the State, as specified in Section 110(l) of the CAA.

Table 7 Incremental VOC Emissions Associated with Discontinuation of Stage II Program Compared to Total Anthropogenic VOC Emissions Inventories

	Annual Anthropogenic VOC Emissions (tons/year)	Summer Day Anthropogenic VOC Emissions (tons/day)	Incremental Emissions from Stage II Removal as Percent of Annual VOC Anthropogenic Inventory	Incremental Emissions from Stage II Removal as Percent of Daily VOC Anthropogenic Inventory
2013 Incremental Emissions	69	0.28		
2016 Incremental Emissions	14	0.057		
2002 Inventory used in RFP	41,494	117.3	0.17% - 2013 0.034% - 2016	0.24% - 2013 0.049% - 2016
2008 Projected Inventory used in RFP		113.5		0.25% - 2013 0.050% - 2016
2009 inventory used for attainment modeling	44,612		0.15% - 2013 0.031% - 2016	
2011 Inventory (draft)	17,289		0.40% - 2013 0.081% - 2016	

4. Summary and Conclusions

As discussed above, Rhode Island is required to make three demonstrations to support a SIP revision to discontinue the Stage II program in the State:

1. A demonstration that ORVR controls are in widespread use in the State;
2. A demonstration that comparable measures are in place to replace emissions reductions lost by the discontinuation of the program (or that emissions reductions associated with the program are *de minimis*); and
3. A demonstration that discontinuation of the program would not interfere with attainment of the ozone NAAQS or with the ability of the State to meet RFP requirements.

The EPA's May 16, 2012 rule fulfilled the first of those requirements by determining that widespread use of ORVR had occurred nationwide by that date. Section 2 of this document demonstrates that, using conservative factors, estimated incremental emissions reductions associated with Stage II are *de minimis* in 2013 (7.2% of refueling emissions), lower still in 2016 (1.5% of refueling emissions) and will be zero by early 2018. Thereafter, operation of Stage II in Rhode Island would be associated with an incremental increase in emissions over ORVR alone. Section 3 demonstrates that the incremental emissions reductions associated with this program constitute a very small fraction of total anthropogenic emissions, and, therefore, will not interfere with RFP or attainment requirements.

Therefore, RI DEM intends to amend RIAPCR No. 11 to remove the requirement that Stage II systems be operated at GDFs in the State as of the effective date of the amended rule and to require that Stage II systems be removed from service by the end of 2017, when emissions reduction associated with those systems will be essentially zero. GDFs will be required to maintain and test their Stage II systems as specified in RIAPCR No. 11 until those systems are decommissioned and to decommission the systems using specified procedures. The RIAPCR No. 11 amendments will also update equipment specifications and introduce testing requirements for Stage I systems, to ensure optimal operation of that equipment.

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-831-5508

Date: 19 September 2013

To: Sharon Savicki
Budget Office
Department of Administration

From: Douglas McVay, Chief
Office of Air Resources
Department of Environmental Management

RE: The Department of Environmental Management (DEM), Office of Air Resources, amendments to Air Pollution Control Regulation No.11, "Petroleum Liquids Marketing and Storage"

Pursuant to RIGL 22-12-1.1, the DEM Office of Air Resources (OAR) is notifying the Budget Officer that it will be proposing the subject amended APC regulation. The OAR is not requesting that the Budget Officer prepare a Fiscal Note because any financial impacts of these amendments on the State or any city or town are expected to be insignificant. These amendments would update the sections of APC Regulation No. 11 that apply to gasoline dispensing facilities to allow decommissioning of Stage II vapor recovery systems and to strengthen the specifications for Stage I vapor recovery systems at those facilities.

Description of the proposed rule changes

As mandated by the federal Clean Air Act, RI DEM amended APC Regulation No. 11 in 1991 to require the installation and operation of Stage II vapor control systems at gasoline dispensing facilities. The Clean Air Act also required the installation of onboard refueling vapor recovery systems (ORVR) on new light-duty vehicles according to a specified schedule. Since ORVR systems and Stage II systems are both designed to capture and control vapors emitted during vehicle refueling, the Clean Air Act acknowledged that, in the future, when most vehicles were equipped with ORVR, Stage II controls would provide little or no incremental emissions reduction benefits over ORVR alone. Therefore, the Clean Air Act provided that Stage II requirements would be waived when a significant portion of the motor vehicle fleet was ORVR-equipped.

The US EPA issued a rule in May 2012 that allows states to discontinue their Stage II programs, since the preponderance of vehicles now in operation nationally are ORVR-equipped. In response to the Federal rule, RI DEM is now proposing to amend Regulation No. 11 to remove Rhode Island's Stage II requirements. To avoid environmental contamination, the amendments require the use of appropriate procedures for decommissioning those systems, including the testing of newly decommissioned systems to ensure that they are leak-tight.

Since 1979, Regulation No. 11 has required that gasoline dispensing facilities be equipped with Stage I systems designed to capture vapors emitted during the transfer of gasoline from tank trucks to the facility's storage tanks. In recent years, the California Resources Board (CARB) has certified certain Stage I systems as Enhanced Vapor Recovery (EVR) Stage I systems. EVR systems are considerably more effective and more likely to continue to operate correctly over time than conventional Stage I systems. RI DEM is now proposing to amend Regulation No. 11 to require gasoline dispensing facilities to upgrade their Stage I systems over time so that those systems utilize the more effective EVR components.

These upgrades will be phased in gradually. The amendments require that three components of Stage I systems, the pressure/vacuum vent valve, product adaptor and vapor adaptor, be upgraded to EVR components within 90 days of the effective date of the amendments. The total cost of those EVR components is approximately $1000. Note that replacement of those components with conventional (non-EVR) parts would cost approximately $650. Most facilities will not require the replacement of product adaptors because they are already equipped with EVR versions of that component. In addition, facilities with aboveground storage tanks are exempted from the product adaptor requirement if installation of such a component is not technically feasible. Since those Stage I components can be easily installed by the operator of a gasoline dispensing facility, no additional installation costs would be associated with this replacement.

The other components of the Stage I system must be replaced with comparable EVR parts as they wear out and become inoperable. The EVR versions of most of the Stage I components cost approximately the same as or slightly more than the corresponding conventional parts. All components must be EVR within 7 years of the adoption of the amendments.

Economic impact on the State or any city/ town

OAR has determined that these amendment will be associated with an insignificant economic impact on the State or to any city or town. The State currently operates approximately 14 gasoline dispensing facilities, most of which would either be exempt from the requirement to install EVR product adaptors or which have already installed EVR product adaptors. Therefore, the total cost to the State of the requirement that the three Stage I components identified above be replaced within 90 days would be less than $14,000. Municipalities in the State operate between 0 and 2 facilities, so the total cost of that replacement to the municipalities would be $2,000 or less.

Those costs will be more than offset by the savings realized by the concurrent removal of Stage II vapor control requirements in these amendments, allowing for the use of conventional nozzles, hoses and other hardware, which are considerably less expensive than comparable Stage II equipment.

Conclusion

As indicated above, it is DEM's conclusion that promulgation of these regulations will not require significant additional expenditures by the State or any city or town. Please let me know if you disagree. We plan to publish the public notice for these regulation changes on or about 30 September 2013. If I don't hear from you, I will assume you concur.

For more information contact:

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Attachments:

Attachment: Proposed Amended Air Pollution Control Regulation No. 11

State of Rhode Island and Providence Plantations
Department of Administration
Budget Office

Fiscal Note for Proposed Administrative Rules (R.I.G.L. 22-12-1.1)

Name of Department or Agency: **Department of Environmental Management, Office of Air Resources**
Name of Administrative Rule: **Air Pollution Control Regulation No. 11, "Petroleum Liquids Marketing and Storage"**

Date of Notice: 9/30/13 **Date of Hearing:** 10/30/13

RIGL: § 42-17.1-2(s) and § 23-23

FISCAL IMPACT

Revenues		*State Expenditures*		*City/Town Expenditures*	
FY 2012	$ 0	FY 2012	$ 0	FY 2012	$ 0
FY 2013	$ 0	FY 2013	$ 0	FY 2013	$ 0
FY 2014	$ 0	FY 2014	$ 0	FY 2014	$ 0

Summary of Policy Change: These amendments would allow gasoline dispensing facilities to decommission their Stage II vapor recovery systems, which capture vapors displaced from vehicle tanks during refueling, and would strengthen requirements for Stage I systems, which capture vapors displaced when tank trucks fill gasoline dispensing facility storage tanks. The amendments also clarify best management practices, as required for the regulation to be equivalent to federal regulations for this source category.

Summary of Fiscal Impact: There will be no net fiscal impact associated with these amendments. Upgrades of three components of Stage I systems are required 90 days after the amendments become effective; those upgrades would be associated with a cost of no more than $1,000 per station. That expense would be more than offset by the savings associated with the removal of Stage II requirements, which the EPA has estimated as a savings of approximately $3,000 per year per station. Other Stage I components would be upgraded only as parts fail, at minimal incremental cost. The management practices would not be associated with incremental costs.

City or Town Impact: No more than two gasoline dispensing facilities are operated by any municipality in the State, so the upfront costs of replacing Stage I equipment would be no more than $2,000 for any municipality. That cost would be more than offset during the first year that the facilities operate after Stage II systems are decommissioned.

Approved**:**

Thomas Mullaney Date
Executive Director/State Budget Officer

RI Air Pollution Control Regulation 11

SMALL BUSINESS IMPACT STATEMENT

In order to accurately predict the impact the adoption, amendment, or repeal of a regulation will have on small businesses, the promulgating authority must conduct a thorough analysis that not only considers the potential effects of the action but also quantifies the costs, if any, associated with each. The questions below are designed to aid promulgating authorities in conducting their analysis.

Agency submitting regulation:

Department of Environmental Management

Subject matter of regulation:

Minimizing emissions of volatile organic compounds from the storage and marketing of petroleum liquids

ERLID No:

5313

Statutory authority:

R.I. Gen. Laws § 42-17.1-2(s) and 23-23, as amended.

Other agencies affected:

None

Other regulations that may duplicate or conflict with the regulation:

No other regulations duplicate or conflict with this regulation.

Describe the scope and objectives of the regulation:

The purpose of this regulation is to minimize emissions of volatile organic compounds (VOC) from the storage and marketing of petroleum liquids.

What was the rationale for establishing this regulation?

Rhode Island, as a nonattainment area for ozone and a part of the Ozone Transport Region, was required by Federal statute to adopt regulations to limits emissions of VOC, an ozone precursor, from this source category.

Does the rationale still exist?

The Federal requirements continue to be applicable for all sections of the regulation except for Stage II vapor control requirements for gasoline stations. The EPA is now allowing states to discontinue Stage II programs if they can demonstrate that that action would not cause violations of the ozone standard and

that equivalent control measures are in place. Rhode Island will be submitting such a demonstration to the EPA this year and will, at that time, propose modifications to Regulation No. 11 to allow removal of Stage II systems in an appropriate manner.

Is the rationale still relevant?

Yes. Elevated levels of ground level ozone continue to occur in Rhode Island during the summer months and the health effects associated with this pollutant continue to be a concern in the State. The rationale for requiring Stage II vapor controls on gasoline stations is no longer relevant, however, because the increasing prevalence of vehicular on-board vapor controls has significantly decreased the effectiveness of the Stage II systems in reducing VOC emissions.

Business industry (s) affected by the regulation:

Regulation No. 11 applies to petroleum liquid storage and distribution facilities and to gasoline dispensing facilities.

Types of businesses included in the industry (s):

Bulk gasoline terminals and plants are subject to storage and distribution requirements in Regulation No. 11. The Stage I and Stage II vapor control requirements apply to gasoline service stations.

Total number of small businesses included in the regulated industry (s) (*Please sees the attached guidance documents for assistance determining the total number of small businesses)*

None of the storage and distribution facilities in the State are small businesses. Approximately 300 of the State's gasoline service stations are small businesses.

Number of small businesses potentially subject to the proposed regulation:

It is estimated that approximately 300 stations that are small businesses are subject to those requirements.

How often do small businesses contact your agency for assistance with clarification of the regulation and/or receive assistance with compliance issues?

The Office of Air Resources (OAR) rarely receives calls from gasoline stations concerning Regulation No. 11 compliance. Stations generally rely on their testing companies for compliance information and the testing companies call OAR if more clarification is required.

What is the cost to your agency of establishing and enforcing this regulation?

One FTE is currently committed to enforcing this regulation.

What would the consequences be if the regulation did not exist?

There would be increased emissions of VOCs, which are precursors to the formation of ground-level ozone. Exposure to ground-level ozone is associated with a variety of respiratory health effects.

Effective date used in cost estimate:

Not Applicable

For each question below, please answer "yes" or "no" and offer a brief explanation.

Please describe any facts, data, views, arguments, or other input from small businesses, organizations or any other sources that were used to quantify the impacts outlined below.

1.	Yes **XX**	No	**Do small businesses have to create, file, or issue additional reports?** Gasoline dispensing facilities subject to Stage II vapor control requirements must submit performance test results to the OAR within 15 days of test.
2.	Yes **XX**	No	**Do small businesses have to implement additional recordkeeping procedures?** Gasoline dispensing facilities subject to Stage I vapor control requirements must keep records of the dates of maintenance, malfunctions and repairs and of gasoline throughput. Facilities subject to Stage II requirements must keep records of dates and results of weekly visual inspections, dates that a gasoline dispenser is removed from and returned to operation, parts of the Stage II system that are replaced and the date of replacement, dates and results of tests, and proof of employee training.
3.	Yes **XX**	No	**Do small businesses have to provide additional administrative oversight?** Operators of gasoline dispensing facilities subject to Stage II requirements must conduct weekly visual inspections of above ground parts of the Stage II system.
4.	Yes	No **XX**	**Do small businesses have to hire additional employees in order to comply with the proposed regulation?** No additional employees are required.
5.	Yes **XX**	No	**Does compliance with the regulation require small businesses to hire other professionals (e.g. a lawyer, accountant, engineer, etc.)?** Annual compliance tests are performed by a contracted testing company.
6.	Yes **XX**	No	**Does the regulation require small businesses to purchase a product or make any other capital investments in order to comply with the regulation?** Capital investment is required when a new vapor control system is installed or when a part must be replaced. Note that, in keeping with a 2012 legislative mandate, OAR is no longer requiring new or substantially modified gasoline dispensing facilities to install Stage II vapor control systems.

7.	Yes	No **XX**	**Are performance standards more appropriate than design standards?** Both design and performance are important. Regulation No. 11 specifies design standards for both Stage I and Stage II systems to ensure that appropriate equipment is installed and requires testing to ensure that the systems continue to perform appropriately.
8.	Yes **XX**	No	**Does the regulation require small businesses to cooperate with audits, inspections, or other regulatory enforcement activities?** The regulation requires facilities to make records available to OAR upon request and to notify OAR at least 7 days in advance of testing Stage II systems so that OAR has the opportunity to observe those tests.
9.	Yes	No **XX**	**Does the regulation have the effect of creating additional taxes and/or fees for small businesses?** No taxes or fees are associated with this regulation.
10.	Yes **XX**	No	**Does the regulation require small businesses to provide educational services to keep up to date with regulatory requirements?** Regulation No. 11 requires that, at all times, at least one person who has attended a a Stage II training session applicable to the system in place at that facility must be employed at the facility. Typically, such trainings are offered by installation and testing companies as part of the system cost.
11.	Yes	No **XX**	**Is the regulation likely to *deter* the formation of small businesses in RI?** Stage II systems are no longer required for new gasoline stations. Stage I system requirements are not cost prohibitive and are fairly consistent from state to state.
12.	Yes	No **XX**	**Is the regulation likely to *encourage* the formation of small businesses in RI?** Regulation No. 11 is unlikely to encourage formation of small businesses. However, clean air has a positive effect on development.
13.	Yes	No **XX**	**Can the regulation provide for less stringent compliance or reporting requirements for small businesses?** The requirements are necessary in order to assure compliance with the regulations.
14.	Yes	No **XX**	**Can the regulation establish less stringent schedules or deadlines for compliance or reporting requirements for small businesses?** Deadlines for installation of controls have already passed. Compliance and reporting requirements are not overly burdensome and are only valuable if done in a timely manner.

15.	Yes	No **XX**	**Can the compliance or reporting requirements be consolidated or simplified for small businesses?** Compliance and reporting requirements are designed to allow small facilities to comply without being overly burdensome.
16.	Yes	No **XX**	**Can performance standards for small businesses replace design or operational standards?** Both design and performance are important. Regulation No. 11 specifies design standards for both Stage I and Stage II systems to ensure that appropriate equipment is installed and requires testing to ensure that the systems continue to perform appropriately.
17.	Yes	No **XX**	**Are there alternative regulatory methods that would minimize the adverse impact on small businesses?** No other methods are available. OAR is moving to remove Stage II requirements, which will lower ongoing costs for small businesses that are currently subject to those requirements.
18.	Yes	No **XX**	**Have any small businesses or small business organizations been contacted during the preparation of this document? If so, please describe.** No, but stakeholders will be involved in the revisions of Regulation No. 11 that will be proposed this year to remove Stage II requirements from the regulation.

RHODE ISLAND
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Date: 19 September 2013

To: Kelly Mahoney
Governor's Office

Sharon Savicki
Budget Office
Department of Administration

Nancy Scarduzio
Office of Management and Budget
Department of Administration

From: Douglas L. McVay, Chief
Office of Air Resources
Department of Environmental Management

RE: Economic Impact Statement & Regulatory Flexibility Analysis for Revisions to Air Pollution Control Regulation No 11

Reason for the Rulemaking

DEM's Office of Air Resources is proposing the above revisions in order to:

1. Discontinue requirements for operation of Stage II vapor capture and control systems at gasoline dispensing facilities. Stage II systems, which capture vapors emitted during vehicle refueling, are not effective when vehicles equipped with onboard refueling vapor recovery (ORVR) systems are refueled. Since the preponderance of vehicles are now ORVR-equipped, Stage II systems are no longer mandated by the EPA.

2. Strengthen requirements for Stage I vapor capture and control systems at gasoline dispensing facilities. Stage I systems capture vapors displaced from storage tanks at gasoline dispensing facilities during tank truck deliveries. Captured vapors are transported by the tank trucks to bulk gasoline facilities for recovery. Stage I systems have been required in Rhode Island since 1979. The amendments update those requirements to specify that, over time, Stage I systems must be upgraded to utilize parts that have been certified as meeting Enhanced Vapor Recovery (EVR) standards.

Economic Impact Statement

Adoption of the proposed amendments to Regulation No. 11 will have an insignificant economic impact on gasoline dispensing facilities. The removal of Stage II system requirements from the regulation will reduce costs to facilities, because conventional hoses, nozzles and other hardware are less expensive than comparable Stage II equipment. Discontinuation of the use of vacuum-assist type Stage II systems will also result in savings in electricity usage, as well as other operational and maintenance costs.

Costs associated with decommissioning Stage II equipment have been minimized as follows:

- Decommissioning of Stage II systems is not required until December 22, 2017, the deadline in the Rhode Island Underground Storage Tank Regulations for permanent closure of single walled tanks. Until that date, decommissioning can be scheduled according to the convenience of facility owners/operators.

- Gasoline dispensing systems with vapor balance type Stage II systems can apply for an exemption from the requirement that they remove their Stage II systems. Most of the facilities with that type of Stage II systems in the State are small, independent facilities with potentially limited resources.

- Although capping vapor piping at the tank top at the time of decommissioning is preferable, it is not required if excavation would be needed to access the vapor piping connection at the tank top.

The proposed amended Stage I vapor recovery system requirements would be associated with additional costs for gasoline dispensing facilities. However, those costs would be more than offset by the savings associated with the removal of the Stage II requirements. The amended regulation requires replacement of three conventional Stage I components with comparable EVR parts within 90 days of the effective date of the amendments. The cost for replacing all three components is approximately $1000, but the cost will be less for the vast preponderance of facilities that have already installed one or more of those EVR components and for facilities with aboveground storage tanks for which installation of one or more of those components is not technically feasible and is not required.

The other components of the Stage I system must be replaced with comparable EVR parts as the conventional parts become inoperable. The costs of the EVR versions of most of the Stage I components are approximately the same as or only slightly higher than the corresponding conventional part. All components must be EVR within 7 years of the adoption of the amendments. The cost to stations at that time will be dependent on how many of the facility's Stage I components were replaced with EVR parts in the interim period, as well as on the prices of EVR components at that time.

The proposed regulation minimizes the costs of the Stage I EVR system requirements as follows:

- Only three components of the Stage I system must be installed 90 days after promulgation of the amended regulation. The other components will be replaced

gradually over time as equipment failures occur. Since the incremental cost of most of those EVR Stage I components over comparable conventional Stage I components are small, the gradual replacement of those parts will not result in significant incremental costs.

- The amendments allow for installation of Stage I systems composed of EVR parts, rather than requiring systems that have been certified as EVR as a whole. This "mix and match" approach allows facilities more latitude in considering costs and availability when purchasing EVR parts.

- The amendments allow use of a non-EVR UL-approved spill container in the place of an EVR spill container provided that the spill container is not designed to attach to the Stage I vapor control system, thus saving the cost of replacing that component.

The savings associated with the removal of the Stage II requirements will more than offset the costs associated with Stage I EVR.

1. **An identification and estimate of the number of the small businesses subject to the proposed regulations.**

   The proposed amendments would affect the approximately 450 gasoline dispensing facilities in the State. Approximately 45 of those facilities are owned by governmental or quasi-governmental organizations. A number of other facilities are either owned and operated by large businesses (e.g. General Dynamics, Wal-Mart, Verizon) to service those businesses' fleets or owned by large petroleum companies (Sunoco, Shell, Gulf, etc.) and would not be small businesses. Since the relationships between the dispensing facilities and the supplying petroleum companies vary widely, it is difficult to accurately estimate the number of facilities that would be considered small businesses.

2. **The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.**

   The proposed amendments do not increase reporting, recordkeeping and administrative requirements. Facilities will continue to be required to test for vapor leaks annually and to supply records of those tests to the Department. Those tests are less expensive and less time consuming after Stage II systems are decommissioned as allowed by the amendments. Tests are performed by testing companies which supply required notifications and certifications to the Department. Note that it has been demonstrated that facilities equipped with EVR Stage I systems maintain compliance over longer periods, thus reducing service costs.

3. **A statement of the probable effect on impacted small businesses.**

   The Department believes that these regulation revisions will have an insignificant impact on small businesses in the State. While the Stage I EVR requirements will be associated with an incremental cost over time, that cost will be more than offset by the regulatory

relief associated with the removal of Stage II vapor control requirements, as specified in these amendments.

4. A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

As delineated above, the Department included a number of provisions in the amended regulation that are designed to minimize the economic impact of the amendments. No additional alternative methods are available that would allow for the achievement of the purpose of the proposed amended regulation at a reduced cost.

Regulatory Flexibility Analysis

1. **The establishment of less stringent compliance or reporting requirements for small businesses**.

   The compliance and reporting requirements specified are the minimum requirements necessary to ensure compliance with the regulation. No additional flexibility for small business is viable.

2. **The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses**.

   The compliance schedules in the amendments are structured to provide flexibility and cannot be extended. Decommissioning of Stage II systems is not require until December 22, 2017, the date that the Underground Storage Tank regulations require single-walled tanks to be removed. In addition, facilities with ORVR-compatible Stage II systems, which are generally the smaller stations, can apply to be exempted from the Stage II decommissioning requirements. The schedule for replacement of conventional Stage I components with EVR parts stretches over a period of 7 years; most components will not be replaced with ORVR parts until they are no longer serviceable.

3. **The consolidation or simplification of compliance or reporting requirements for small businesses.**

   There is no consolidation or simplification necessary because reporting is generally done by testing companies.

4. **The establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation.**

   The only feasible way to limit emissions from gasoline dispensing facilities is by establishing equipment and procedural standards, consistent with those in the amended regulation.

5. **The exemption of small businesses from all or any part of the requirements contained in the proposed regulation.**

   Since the Stage II portion of these amendments provide regulatory relief, it would not make sense to exempt small businesses from those specifications. However, in the event that a station with an ORVR-compatible Stage II system does not want to remove its Stage II system, the amendments allow for that station to apply for an exemption to decommissioning requirements. The Stage I requirements are associated with modest incremental costs stretched across a period of seven years. No small business exemptions are indicated.

A public notice regarding the proposed regulation revisions is scheduled to be published on 30 September 2013.