

**HEARING REPORT**

**Prepared Pursuant to Section 4-168(d) of the  
Connecticut General Statutes and  
Section 22a-3a-3(d)(5) of the Department of Energy and Environmental Protection  
Rules of Practice**

**Regarding  
Amendment of Air Quality Regulations Concerning  
Control of Volatile Organic Compound Emissions during  
the Transfer and Dispensing of Gasoline**

**Hearing Officer:  
Robin D. Baena**

**Date of Hearing: July 24, 2014**

On June 12, 2014, the Commissioner of the Department of Energy and Environmental Protection (DEEP) published a notice of intent to amend section 22a-174-20 of the Regulations of Connecticut State Agencies (RCSA), adopt RCSA section 22a-174-30a, and repeal RCSA section 22a-174-30. Pursuant to such notice, a public hearing was held on July 24, 2014, with the public comment period closing on July 25, 2014.

**I. Hearing Report Content**

As required by section 4-168(d) of the Connecticut General Statutes (CGS), this report describes the proposal, identifies principal reasons in support of and in opposition to the proposal, and summarizes and responds to all comments on the proposal.

The proposal is included as Attachment 2 to this report. A final revised version of the proposal based on the recommendations in this report is included as Attachment 3. A statement in satisfaction of CGS section 22a-6(h) is included as Attachment 1.

**II. Summary of Proposal**

The commissioner is proposing to revise subsections (a) and (b) of RCSA section 22a-174-20, adopt RCSA section 22a-174-30a, and repeal RCSA section 22a-174-30. The proposal primarily updates existing requirements concerned with the control of volatile organic compound (VOC) emissions from gasoline dispensing facilities (GDFs) so that the regulations reflect the current status of the state's GDF vapor recovery program as set out in section 22a-174e of the Connecticut General Statutes (CGS), as revised by Public Act No. 13-120 in 2013. More specifically, DEEP is proposing to:

- Revise RCSA section 22a-174-20(a)(7) to correct and clarify the requirements for the external surfaces of VOC-containing aboveground storage tanks;

- Consolidate the Stage I<sup>1</sup> vapor recovery requirements contained in RCSA sections 22a-174-20(b) and 22a-174-30 into new proposed RCSA section 22a-174-30a;
- Incorporate existing federal requirements for controlling air emissions from gasoline delivery vehicles and GDFs (40 CFR 63 Subpart CCCCCC, Tables 1 and 2) into RCSA sections 22a-174-20(b) and 22a-174-30a, respectively;
- Require the use of a California Air Resource Board (CARB)-approved pressure vacuum (P/V) valve; and
- Remove the requirements for the installation and operation of Stage II<sup>2</sup> vapor recovery equipment at GDFs by repealing RCSA section 22a-174-30.

### III. Opposition to the Proposal

One commenter (commenter #2) expressed opposition to the adoption of this proposal because he is a strong opponent of removing Stage II vapor recovery. The requirement to decommission Stage II vapor recovery equipment is, however, mandated by CGS section 22a-174e.

### IV. Summary of Comments

Written comments were received from the following persons:

1. Anne Arnold, Manager  
Air Quality Planning Unit  
USEPA Region 1  
5 Post Office Square, Suite 100  
Boston, MA 02109-3912
2. Ted Tiberi  
ARID Technologies, Inc.  
323 S. Hale Street  
Wheaton, IL 60187
3. Michael J. Fox  
Executive Director  
GASDA, Inc.  
29 Thornhill Road  
Riverside, CT. 06878
4. Jennifer Celeste  
Manager, Product and Regulatory Support  
Sunoco Inc.  
100 Green Street  
Marcus Hook, PA 19061

---

1 Stage I vapor recovery systems divert the gasoline vapor displaced from a storage tank during refilling into the tanker compartment of the delivery vehicle.

2 Stage II vapor recovery systems control vapors during the refueling of vehicles by capturing the gasoline vapors displaced from the vehicles' gas tank and diverting them to the storage tank.

All comments submitted are summarized below with DEEP's responses. Commenters are associated with the individual comments below by the number assigned above. When changes to the proposed text are indicated in response to comment, new text is in bold font and deleted text is in strikethrough font.

**Comment 1:** The National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Gasoline Dispensing Facilities, Part 63 Subpart CCCCC (GDF NESHAP) allows sources with a monthly throughput of 100,000 gallons or more to be deemed in compliance with vapor balance requirements if, prior to January 10, 2008, the source complies with an enforceable state rule that either requires an emissions reduction of at least 90% or requires management practices at least as stringent as those in Table 1 of the GDF NESHAP. EPA Region I found that GDFs subject to and in compliance with a RSCA section 22a-174-30 Stage II vapor recovery requirements and with a CARB certified Stage I vapor balance system prior to January 10, 2008, may comply with RSCA section 22a-174-30 and section 22a-174-20(b) as an alternative to complying with the GDF NESHAP Table I management practices, and with the periodic testing requirements in 40 CFR 1120(a). Therefore, GDF in compliance with these Connecticut requirements prior to January 10, 2008 have not been subject to the notification, testing and reporting requirements in the NESHAP. Because Connecticut is now proposing to remove Stage II requirements and the requirement for a CARB certified Stage I system, Connecticut may add the NESHAP Table I management practices to RSCA 22a-174-30a instead of an enforceable 90% emission reduction requirement in order for sources, prior to January 10, 2008, to follow Connecticut rules to meet NESHAP compliance. (1)

**Response:** DEEP is proposing to remove Stage II vapor recovery requirements from the RCSA through the repeal of section 22a-174-30 and to consolidate Stage I vapor recovery requirements, currently located in RCSA sections 22a-174-20(b) and 22a-174-30, into new RCSA section 22a-174-30a. DEEP did not propose to remove any Stage I requirements from its regulations. In addition, DEEP added the NESHAP Table 1 management practices into proposed RSCA 22a-174-30a. Therefore, sources that were subject to and in compliance with RCSA section 22a-174-30 prior to January 10, 2008 to meet NESHAP compliance by following the state rule will remain in compliance under the proposal. However, the requirement to equip GDF storage tanks with a Stage I vapor recovery system should be explicitly stated by revising proposed section 22a-174-30a(c)(1) as follows:

- (1) No owner or operator of a GDF shall transfer or allow the transfer of gasoline between a delivery vehicle and a GDF stationary storage tank unless such stationary storage tank is equipped with a **Stage I vapor recovery system that includes:**
  - (A) A CARB-approved fill adapter; and
  - (B) A pressure/vacuum vent valve on ~~the~~ **each** GDF storage tank vent ~~pipes~~ **pipe**.

*(The revisions recommended in hearing officer comment 4 are included in the above text.)*

**Comment 2:** For GDF with a monthly throughput of 100,000 gallons or more, the GDF NESHAP requires pressure/vacuum (P/V) vent valve specifications of a positive pressure setting of 2.5 to 6.0 inches of water, and a negative pressure setting of 6.0 to 10.0 inches of water, and a total leak rate not exceeding 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water. Connecticut's rule requires these settings for GDFs after July 1, 2015. In order for Connecticut's rule to include all of the Table 1 management practices,

RCSA 22a-174-30a(c)(6) must require these settings for P/V vent valves for all GDFs with a monthly throughput of 100,000 gallons or more. (1)

**Response:** As explained in the response to comment 1, DEEP is retaining all current Stage I vapor recovery requirements in the proposal and incorporating the NESHAP Table 1 management practices into proposed RCSA 22a-174-30a. The positive pressure setting specified in proposed RCSA section 22a-174-30a(c)(3)(A)(i)(I) is identical to the positive pressure settings set out in RCSA section 22a-174-30(c)(6)(A). DEEP's intent in including this pressure specification in the proposal is to allow for the continued use of P/V vent valves that were installed prior to the effective date of the proposal (July 1, 2015) that could not meet the more protective standard set out in Table 1 of the NESHAP at GDF that were not subject to the NESHAP Table 1 requirements. Once these valves require replacement, however, only CARB-approved valves meeting the positive pressure setting of 2.5 to 6.0 inches of water column specification can be installed. Therefore, the NESHAP Table 1 P/V vent valve pressure settings will be phased-in with valve replacement for all GDF subject to proposed section 22a-174-30a, not just those with a monthly throughput of 100,000 gallons or greater. The owner/operator of any GDF required to install P/V vent valves with a positive pressure setting of 2.5 to 6.0 inches of water column pursuant the NESHAP can comply with the proposal under section 22a-174-30a(c)(3)(A)(i)(II). DEEP should not make any changes to the proposal based on this comment.

**Comment 3:** RCSA section 22a-174-30a(d) requires an annual static pressure test according to the current CARB TP-201.3, as may be revised from time to time, and an annual PV vent valve test according to the current CARB TP-201.IE, as may be revised from time to time. The GDF NESHAP requires a static pressure test according to CARB TP-201.3, adopted April 12, 1996, and amended March 17, 1999; or according to Bay Area Air Quality Management District Source Test Procedure ST-30 Static Pressure Integrity Test - Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994, and a PV vent valve test according to TP-201.IE, adopted October 8, 2003. A facility subject to the NESHAP vapor balance testing requirements (e.g., all new sources after January 10, 2008) using CARB TP-201.3 and CARB TP-201.IE for NESHAP compliance will be required to conduct the tests using the versions incorporated into the NESHAP unless a facility or the state requests and EPA approves a revised version of these tests as equivalent to the NESHAP. (1)

**Response:** CARB updates and revises its test procedures to correct and improve the test procedures. For example, CARB revised TP-201.3 in 2012 to correct a conversion factor used to calculate the minimum time required to pressurize the vapor space in the tank. The previous conversion factor overestimates the required pressurization time and results in a poor estimation of the amount of nitrogen needed to pressurize the tank. DEEP believes that use of the most accurate and up-to-date test procedures results in better vapor recovery system performance in the field by providing the most accurate measurement and verification of proper operation of installed vapor recovery systems. DEEP also recognizes that the owner/operator of a GDF subject to the NESHAP must comply with those requirements and the option to test according to 40 CFR 63.11120 for an owner/operator of a GDF subject to the NESHAP testing requirements should be added to RCSA section 22a-174-30a(d).

In addition, DEEP has recently become aware of several GDFs that have found it economically advantageous to install pressure management systems on their storage tanks to recover product. To avoid damaging the pressure management equipment when testing the storage tank, testers

have been isolating the device from the tank. To ensure integrity of the whole vapor recovery system, any device that penetrates the tank wall must also be tested. Additional pressure management and vapor recovery systems may be installed as the cost of gasoline rises and the advantage of installing these devices increases. But, since the type of systems that will be installed cannot be predicted, a proper test method cannot be specified for all possible systems at this time. Therefore, the proposal should be revised to require the GDF owner/operator to submit a test protocol for the DEEP to review and approve prior to testing such devices.

Finally, proposed section 22a-174-30a(d) requires an owner/operator who fails a test to take corrective actions and retest within in 60 days, but there is no requirement for the owner/operator to notify DEEP of the retest or submit the results of the retest. An owner/operator who is required to retest in accordance with proposed section 22a-174-30a(d) should be required to notify DEEP of the retest and submit the results of the retest. To reflect that intent, proposed section 22a-174-30a(d)(7)(A), which was renumbered as subparagraph (9)(A), should be revised to clarify that notification and results submittals are required for all testing required by subsection (d).

To allow an owner/operator the option to test according to 40 CFR 63.11120, require testing of any device that penetrates the tank wall, require notification and submittal of results for all required testing, and clarify language, RCSA section 22a-174-30a(d) should be revised as follows:

- (d) Testing.
  - (1) The owner or operator **of any GDF** shall conduct each of the following tests at least once per calendar year:
    - (A) For every pressure/vacuum vent valve, a pressure/vacuum vent valve test as specified in subdivision (4) of this subsection;
    - (B) A pressure decay test as specified in subdivision (5) of this subsection; and
    - (C) A vapor-space tie-in test as specified in subdivision ~~(6)~~ (7) of this subsection.
  - (2) ~~Any~~ **The owner or operator of any** GDF constructed on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of initial operation.
  - (3) ~~Any~~ **The owner or operator of any** GDF modified on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of completion of the modification.
  - (4) Pressure/vacuum vent valve tests shall be conducted according to the current version of CARB TP-201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.
  - (5) Pressure decay tests shall be conducted according to the current version of CARB TP-201.3, *Determination of 2 Inch WC Static Pressure Performance of Vapor*

*Recovery Systems of Dispensing Facilities*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.

- (6) **The owner or operator of any GDF subject to 40 CFR 63.11120 may use the test methods specified in 40 CFR 63.11120 in lieu of the method specified in subdivision (4) or subdivision (5) of this subsection.**
- (7) Vapor-space tie-in tests shall be conducted according to the current version of CARB TP-201.3C, *Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test)*, as may be revised from time to time, or another method test approved by the Commissioner and the Administrator.
- (8) **The owner or operator of any GDF that has installed a pressure management or vapor control device on a storage tank with a capacity of 250 gallons or greater, other than a device that is required to be installed and tested by this section, shall test such device annually by a method approved by the commissioner. At least sixty (60) days prior to conducting an annual test, the owner or operator shall submit a test protocol for review and approval on a form provided by the commissioner.**
- ~~(7)~~(9) Any owner or operator shall:
  - (A) Notify the Department's Bureau of Air Management, Field Operations Section in writing of the time and location of a test required by ~~subdivision (4)~~ of this subsection at least seven (7) business days in advance; and
  - (B) Submit a copy of the test report on a form provided by the Department to the Department's Bureau of Air Management, Field Operations Section within ten (10) days after performing a test required by this subsection.
- ~~(8)~~(10) If an owner or operator fails any test required by this subsection, the owner or operator shall take corrective actions and retest no later than sixty (60) days after failing the test.

**Comment 4:** DEEP is proposing to amend its regulations to discontinue the requirements to install and operate Stage II vapor recovery controls, per Public Act No. 13-120's revision of Connecticut General Statutes (CGS) section 22a-174e, and to reorganize Stage I requirements. Connecticut's Stage I and Stage II programs have been approved into the Connecticut State Implementation Plan (SIP). Therefore, the revised rules should be submitted to EPA as a SIP revision.

In order for EPA to be able to approve this SIP revision, Connecticut must demonstrate that it meets the anti-backsliding requirements of Section 110(1) of the Clean Air Act (CAA). With respect to Stage II, EPA Region 1 is aware that CT DEEP has been working on a demonstration, for which a separate public notice is planned, to satisfy the necessary CAA requirements in accordance with EPA's "Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures," issued on August 7, 2012. This demonstration should be submitted to EPA as a SIP revision to support the Stage II program phase-out. EPA recommends that the demonstration also explain how the new Stage I regulation meets Section 110(1) requirements. It appears that the proposed requirements are no less stringent

than the previously approved SIP requirements. CT DEEP should verify and document that fact. (1)

**Response:** DEEP will submit this amendment and CGS section 22a-174e as amended by Public Act No. 13-120 as a SIP revision after this amendment is adopted. As part of that submission, DEEP will demonstrate that the requirements of sections 110(l) and 184(b)(2) of the Clean Air Act (CAA) are met. DEEP should not make any changes to the proposal based on this comment.

**Comment 5:** DEEP is proposing revisions to certain subdivisions of sections 22a-174-20(a) and 22a-174-20(b). When DEEP submits its SIP revision, it would be helpful for EPA's processing of the SIP revision, if the submittal included the complete, as amended, 22a-174-20(a) and 22a-174-20(b) for incorporation by reference. (1)

**Response:** As requested, DEEP will include the complete amended subsections (a) and (b) of section 22a-174-20 in its SIP submittal to aid in EPA's processing of the SIP revision. DEEP should not make any changes to the proposal based on this comment.

**Comment 6:** For clarity, we recommend that proposed RCSA section 22a-174-30a(c)(3)(A)(i)(I) be revised, similar to Connecticut's existing Stage II rule, to read as follows:

"3 inches of water, plus or minus ~~1/2~~ one-half (0.5) inch, or ..."

Likewise, proposed subdivision 22a-174-30a(c)(3)(A)(ii) should be revised to read as follows:

"A vacuum setting of 8 inches of water, plus or minus two (2.0) inches, and ..." (1)

**Response:** RCSA section 22a-174-30a(c)(3)(A) should be revised for clarity by consistently using one decimal place for all pressure specifications as follows:

- (A) For any pressure/vacuum vent valve installed prior to July 1, 2015:
  - (i) A positive pressure setting of:
    - (I)  $\geq$  **3.0** inches of water, plus or minus ~~1/2~~ **0.5** inch, or
    - (II) 2.5 to 6.0 inches of water, and
  - (ii) A vacuum setting of  $\geq$  **8.0** inches of water, plus or minus  $\geq$  **2.0** inches; and  
...

**Comment 7:** The recordkeeping requirements for maintaining records of the daily throughput of gasoline and of scheduled and unscheduled maintenance of the vapor balance system and other system components, found at RCSA section 22a-174-20(aa)(5), apply to any premise subject to the provisions of subdivisions 22a-174-20(b)(5) or (b)(6). The proposed amendments delete subdivision 22a-174-20(b)(6). As a result, facilities currently subject to subdivision 22a-174-20(b)(6) would no longer be subject to the recordkeeping requirements at 22a-174-20(aa)(5).

Proposed section 22a-174-30a(e)(1)(C) includes recordkeeping requirements for maintenance of the Stage I vapor recovery system; however, the throughput recordkeeping requirements are not currently included in proposed section 22a-174-30a(e). Maintaining records of throughput is important since the applicability of the rule's requirements is based on two throughput levels (*i.e.*, 10,000 and 100,000 gallons per 30-day rolling period). Thus, throughput recordkeeping requirements should be added to section 22a-174-30a(e). (1)

**Response:** DEEP agrees that daily gasoline throughput records required by RCSA section 22a-174-20(aa)(5) should be retained. A gasoline throughput recordkeeping requirement should be added to the proposal by adding subparagraph (F) to section 22a-174-30a(e)(1) as follows:

**(e) Record keeping.**

(1) Any owner or operator of a GDF shall maintain the following records:

- (A) All licenses, as that term is defined in section 4-166 of the Connecticut General Statutes, to construct or operate the GDF or to construct or operate a specific system at the GDF;
- (B) All records and results of tests performed pursuant to subsection (d) of this section, including the date of the testing and the names, addresses, and phone numbers of the persons who performed the tests;
- (C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance ~~problem or~~ **repair performed**, identification of any part ~~or parts~~ repaired or replaced on such Stage I vapor recovery system, the ~~date such part or parts were repaired or replaced~~ **dates the maintenance or repair was performed**, and a general description of the location of ~~the part or parts in the system~~ **of any part repaired or replaced**;
- (D) A chronological file of all inspection reports issued by a representative of the Commissioner or the Administrator for inspections performed at the GDF; ~~and~~
- (E) A chronological file of all compliance records, including orders, warnings and notices of violations, issued by a representative of the Commissioner or the Administrator; ~~and~~
- (F) **A chronological register of daily throughput of gasoline.**

*(The revisions recommended in hearing officer comment 7 are included in the above text.)*

In addition, GDFs with a throughput of less than 10,000 gallons per month must keep records to demonstrate that they are not subject to the rule. Such recordkeeping requirements should be added to the proposal by appending subdivision (4) to subsection (b) of RCSA section 22a-174-30a. Subdivision (4) should read as follows:

- (4) **The owner or operator of a GDF that does not meet the monthly throughput requirements of subdivision (1) of this subsection shall maintain a chronological register of daily throughput of gasoline to demonstrate that this section does not apply. Such records shall be maintained for five (5) years from the date of creation and be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner no later than three (3) business days after receiving such a request.**

Section 22a-174-20(aa)(5) should be revised as part of a future proposal to remove the reference to section 22a-174-20(b)(6). For reference, RCSA section 22a-174-20(aa)(5) reads as follows:

- (5) The owner or “operator” of any premise subject to the provisions of subdivisions 22a-174-20(b)(5) or (b)(6) shall maintain the following records for the premise:
  - (A) daily throughput of gasoline; and
  - (B) records of both scheduled and unscheduled maintenance of the “vapor balance system” and other system components.

**Comment 8:** Connecticut is proposing to repeal RCSA section 22a-174-30 "Dispensing of Gasoline/Stage I and Stage II Vapor Recovery" and adopt a new RCSA section 22a-174-30a "Stage I Vapor Recovery." There are, however, some Stage II vapor recovery provisions that should continue into the future. Specifically, Connecticut DEEP should ensure that its SIP submittal includes enforceable requirements that specify the decommissioning procedures to be used, the date by which decommissioning must take place, and the operation and maintenance requirements for Stage II vapor recovery systems that must continue until decommissioning takes place. (1)

**Response:** DEEP will continue to enforce RCSA section 22a-174-30 at any GDF with Stage II vapor recovery equipment installed until the section is repealed on July 1, 2015. This date coincides with the date that CGS section 22a-174e requires that all Stage II vapor recovery equipment be decommissioned. CGS section 22a-174e specifies that decommissioning be performed in accordance with Section 14 of the 2009 "Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Refueling Sites" of the Petroleum Equipment Institute. DEEP will include CGS section 22a-174e in its SIP submittal. DEEP should not make any changes to the proposal based on this comment.

**Comment 9:** EPA encourages DEEP to include California Air Resources (CARB) enhanced Stage I vapor recovery requirements in Connecticut’s Stage I vapor recovery regulation. Rhode Island has adopted and Massachusetts has proposed to adopt these requirements. Enhancing Connecticut’s Stage I requirements would provide additional reductions to help address continuing ozone nonattainment issues in Connecticut. (1)

**Response:** The purpose of this proposal is to update the regulations to be consistent with section 22a-174e of the Connecticut General Statutes, not to propose Stage I upgrades. DEEP will evaluate the feasibility and benefit of adopting CARB enhanced Stage I vapor recovery requirements based on the experience in other states. DEEP should not make any changes to the proposal based on this comment.

**Comment 10:** ARID has been a strong opponent of removing Stage II vapor recovery. Removal of Stage II vapor recovery will result in excess emissions and increased health risks. Recently, the Waterford Professional Firefighters Association warned the refueling public of safety hazards associated with refueling non-ORVR vehicles at non-Stage II GDF.<sup>3</sup> Careless refueling can lead

---

3 Cura, Jamie. “Waterford Firefighters Warn of Vapors in Air when Pumping Gas.” *Waterford Patch*. July 10, 2014. (<http://waterford.patch.com/groups/police-and-fire/p/waterford-firefighters-warn-of-vapors-in-air-when-pumping-gas>)

to flash fires at the nozzle/automobile interface. This risk, though always present, would be much less with the use of Stage II vapor recovery.

Video shot with an infrared camera of a non-ORVR vehicle being refueled at a non-Stage II station (commenter submitted file by email) shows vapors escaping. The video and a study conducted by the Finnish Institute of Occupational Health comparing hydrocarbon concentrations in proximity to the motorist at GDF's with and without Stage II vapor recovery systems in place<sup>4</sup> show that the safety and health risks are increased while refueling non-ORVR vehicles in the absence of Stage II vapor recovery. The increased risk could increase the liability and insurance premiums of GDF owners/operators. (2)

**Comment 11:** The Waterford Professional Firefighters Association's fire-safety recommendations are common sense recommendations. The emissions visible in the infrared video during the refueling event and the Finnish Institute of Occupational Health study referred to in Comment 8 are for vehicles without ORVR refueling at stations without Stage II and show why federal law required Stage II vapor recovery. The Clean Air Act also recognized the incompatibility between Stage II systems and ORVR and, therefore, allowed for the removal of Stage II systems when enough vehicles were ORVR equipped. The majority of vehicles currently on the road have ORVR installed to reduce refueling emissions. The decommissioning of Stage II equipment will not increase the risk of flash fires at the nozzle/automobile interface, and there is no expectation that insurance premiums will increase for GDF owners/operators after decommissioning. (3)

**Comment 12:** The Finnish Institute of Occupational Health study cited in Comment 8 is 14 years old and does not discuss the emissions impact of cars with ORVR. The article is outdated and does not address the current vehicle fleet. The reason behind removing Stage II vapor recovery systems is the incompatibility between ORVR and Stage II vapor recovery. Since the majority of the vehicles in the United States have ORVR, Stage II vapor recovery at service stations is actually causing more air pollution. Sunoco has no issues with the proposed regulations. (4)

**Response to comments 10, 11 and 12:** Section 22a-174e of the Connecticut General Statutes as revised by [Public Act No. 13-120](#) mandates the decommissioning of existing Stage II vapor recovery equipment and prohibits the installation of new Stage II vapor recovery equipment. Although the proposal removes Stage II vapor recovery requirements from the Regulations of Connecticut State Agencies by repealing section 22a-174-30, adoption of the proposal will not change the status of Connecticut's Stage II vapor recovery program. All Stage II equipment must be decommissioned by July 1, 2015. DEEP should not make any changes to the proposal based on these comments.

## V. Comments of Hearing Officer

The hearing officer suggests the following additional revisions to the proposal.

The following suggested revisions will make for a clearer final proposal and will improve the enforceability of the final regulation.

(1) CARB currently approves GDF vapor recovery equipment as part of enhanced vapor recovery (EVR) systems and not as individual components. The components of these approved

---

<sup>4</sup> Hakkola, Matti A. and Lauri H. Saarinen. "Customer Exposure to Gasoline Vapors During Refueling at Service Stations." *Applied Occupational and Environmental Hygiene*. 15(9). 677-680. 2000.

systems are of better quality than some components on the market. DEEP is not requiring the installation of EVR systems at this time. However, to clarify that a component of an approved system can be used individually and not only as part of an approved system, the definition of “CARB-approved” in section 22a-174-30a(a)(2) should be revised as follows:

- (2) “CARB-approved” means a Stage I vapor recovery system or system component that is or has been tested and approved by CARB **as an individual component or as part of an approved system** or that is or has been tested and approved by another state using testing methods approved by CARB;

(2) Proposed section 22a-174-30a(a)(7) should be revised for clarity as follows:

- ~~(7)~~(8) “Modified” means **the addition, alteration, replacement or retrofit of** a gasoline storage tank ~~with a capacity of 250 gallons or more~~ located at a GDF or any component fixed to such gasoline storage tank ~~that has been added, altered, replaced or retrofitted~~. Components of a gasoline storage tank include, but are not limited to, piping that contains gasoline or gasoline vapors and containments located over or on the gasoline storage tank;

*(Subdivision (7) is renumbered as subdivision (8) due to the addition of a definition for “construction” as described in hearing officer comment 3)*

(3) The DEEP believes that requiring a GDF that has exceeded the applicability threshold of subdivisions (7) or (8) of section 22a-174-20(b) in the distant past, but is no longer dispensing gasoline at that rate, to maintain and annually test a Stage I vapor recovery system is unnecessarily burdensome. The gasoline dispensing market has changed significantly since the promulgation of Connecticut’s Stage I vapor recovery requirements. Today, large super-stations dominate the market and small independently owned stations sell only a minor fraction of the gasoline dispensed in the state. These small businesses operate on a narrow profit margin. Requiring the owner of a small GDF to comply with proposed section 22a-174-30a could make the operation unprofitable.

Requiring the small GDFs to maintain and test their Stage I vapor recovery system produces little, if any, environmental benefit. Based on AP-42 emission factors (chapter 5.2), emissions from an uncontrolled station with a monthly throughput of 10,000 gallons of gasoline are calculated to be 70 pounds per month greater than they would be at a station with Stage I controls. Controlling emissions of less than 70 pounds per month at GDFs with current monthly throughputs of less than 10,000 gallons by requiring station owners to maintain and test Stage I equipment is not economically reasonable and provides an unfair advantage to large stations as the control costs are a much lower percentage of total sales for large stations.

By requiring Stage I controls on all GDFs with monthly throughputs of 10,000 gallons or greater, Connecticut’s regulations are much more stringent than the federal rules. 40 CFR 63 subpart CCCCCC requires Stage I controls to be installed only on GDFs with a monthly throughput of 100,000 gallons or greater. Further exceeding the federal requirements by requiring Stage I controls at GDFs that do not and have not in the recent past operated with a monthly throughput of 10,000 gallons or greater is not justified economically or based on environmental benefits.

Some GDFs with Stage II vapor controls installed dispensed 10,000 gallons or more only during a few months decades ago under unusual circumstances, for example, when a nearby station was closed, and have not dispensed at that rate since. Others have never exceeded the 10,000 gallon

applicability threshold, but had installed and operated Stage I and Stage II vapor recovery equipment. Therefore, determining applicability to proposed section 22a-174-30a through past compliance with section 22a-174-30 is not reasonable. However for the proposed regulation to be reasonably enforceable, applicability cannot be transient and, going forward from promulgation of the proposal, an owner/operator of a GDF should be subject to the requirements of the regulation once the applicability threshold has been triggered. In addition, to be consistent with 40 CFR 63 subpart CCCCC, applicability should be based on a monthly throughput as defined in 40 CFR 63.11132, rather than basing applicability on a 30-day rolling aggregate. Since monthly throughput is based on a 12-month average, one year of data is required for the calculation.

Applicability should be determined based on monthly throughput calculated beginning on July 1, 2015 by revising proposed section 22a-174-30a(b) as follows:

**(b) Applicability.**

- ~~(1) On and after July 1, 2015, the provisions of this section apply to:~~
- ~~(A) The owner or operator of any GDF that has a throughput of 10,000 gallons or more, based on a 30-day aggregate; and~~
  - ~~(B) The owner or operator of any GDF that was subject to the requirements of former section 22a-174-30 of the Regulations of Connecticut State Agencies.~~
- ~~(2) If a GDF exceeds a throughput of 10,000 gallons during any 30-day rolling period, the requirements of this section shall always apply.~~
- (1) This section applies to the owner or operator of any GDF that has a monthly throughput of 10,000 gallons or more on or after July 1, 2015. If a monthly throughput of 10,000 gallons is exceeded, the requirements of this section shall thereafter apply.**
- (2) Monthly throughput shall be calculated by adding the volume of gasoline dispensed at the GDF during the current day with the volume of gasoline dispensed at the GDF during the previous 364 days, and dividing that sum by 12. For any GDF constructed after July 1, 2014, the initial calculation of monthly throughput shall be performed on or after 365 days after the date the GDF starts dispensing gasoline to motor vehicles.**
- (3) For a GDF with multiple storage tanks, the requirements of this section apply only to a storage tank with a capacity of 250 gallons or greater.**
- (4) The owner or operator of a GDF that does not meet the monthly throughput requirements of subdivision (1) of this subsection shall maintain a chronological register of daily throughput of gasoline to demonstrate that this section does not apply. Such records shall be maintained for five (5) years from the date of creation and be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner no later than three (3) business days after receiving such a request.**

*(The revisions recommended in the response to comment 7 are included in the above text.)*

In addition, a definition for construction should be added to section 22a-174-30a(a) as follows and subsection (a) should be renumbered accordingly:

**“Construct” means to install or replace all storage tanks with a capacity greater than 250 gallons, the product piping and the vent piping at a GDF during a single project;**

Construction dates and the date gasoline was first dispensed are needed to determine applicability for a new or rebuilt GDF; therefore, section 22a-174-30a(e) should be revised to require such records as follows:

**(e) Record keeping.**

(1) Any owner or operator of a GDF shall maintain the following records:

- (A) All licenses, as that term is defined in section 4-166 of the Connecticut General Statutes, to construct or operate the GDF or to construct or operate a specific system at the GDF;
- (B) All records and results of tests performed pursuant to subsection (d) of this section, including the date of the testing and the names, addresses, and phone numbers of the persons who performed the tests;
- (C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance ~~problem or~~ **repair performed**, identification of any part ~~or parts~~ repaired or replaced on such Stage I vapor recovery system, ~~the date such part or parts were repaired or replaced~~ **dates the maintenance or repair was performed**, and a general description of the location of ~~the part or parts in the system~~ **of any part repaired or replaced**;
- (D) A chronological file of all inspection reports issued by a representative of the Commissioner or the Administrator for inspections performed at the GDF; ~~and~~
- (E) A chronological file of all compliance records, including orders, warnings and notices of violations, issued by a representative of the Commissioner or the Administrator; ~~and~~
- (F) **A chronological register of daily throughput of gasoline.**

(2) **In addition to the applicable records required by subdivision (1) of this subsection, any owner or operator of a GDF constructed after July 1, 2014 shall maintain records of the dates of the construction and the date gasoline was first dispensed to a motor vehicle.**

~~(2)~~(3) Records required by this subsection shall be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner no later than three (3) business days after receiving such a request.

- (3)(4) Records shall be maintained for five (5) years from the date of creation.
- (4)(5) An owner or operator shall display in a conspicuous location at the GDF the address at which the records required by subdivision (1) of this subsection are maintained.

*(The revisions recommended in comment 7 and hearing officer comment 7 are included in the above text.)*

Finally, to be consistent with the federal requirements and proposed section 22a-174-30a(b), proposed section 22a-174-30a(c)(6) should be revised as follows:

- (6) In addition to the requirements of subdivisions (1) through (5) of this subsection, an owner or operator of any GDF that has a **monthly** throughput of 100,000 gallons or more, ~~based on a 30-day aggregate~~, shall install, operate and maintain a Stage I vapor recovery system that meets the requirements of subparagraphs (A) through (F) of this subdivision. If a GDF exceeds a **monthly** throughput of 100,000 gallons ~~during any 30-day rolling period~~, the requirements of this subdivision shall always apply. ...
- (4) Proposed section 22a-174-30a(c)(1)(B) should be revised as follows for clarity:
- (B) A pressure/vacuum vent valve on ~~the~~ **each** GDF storage tank vent ~~pipes~~ **pipe**.
- (5) Section 22a-174-20(b)(13) requires an owner/operator to repair and retest a delivery vehicle that fails the tests required by subdivision (12) within 15 days of a failed test. The owner/operator may, however, prefer to permanently or temporarily remove the vehicle from service. Text should be added to subdivision (13) to allow the owner/operator to take the vehicle out of service and require retesting prior to returning the vehicle to service.
- (13) The owner or operator of any delivery vehicle [which] that fails to meet the requirements of [subdivisions] subdivision (12) [or (14)] of this subsection shall repair and retest such vehicle within fifteen (15) days **or take such vehicle out of service. Prior to returning such vehicle to service, the owner or operator shall repair and retest the vehicle.**
- (6) Proposed section 22a-174-20(b)(14) requires an owner/operator to notify the department prior to conducting annual testing of a delivery vehicle required by subdivision (12), but does not require notification if retesting is required according to subdivision (13). An owner/operator should be required to notify the department prior to any required testing. Therefore, section 22a-174-20(b)(14) should be revised to require such notification as follows:
- (14) Any person who performs a test required by subdivision (12) **or (13)** of this subsection shall[: (A)] notify the Department's [Air Compliance Unit] Bureau of Air Management, Field Operations Section of the time and location of the test at least forty-eight (48) hours in advance
- (7) Proposed section 22a-174-30a(e)(1)(C) should be revised as follows for clarity:
- (C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance ~~problem~~ **or**

**repair performed**, identification of any part ~~or parts~~ repaired or replaced on such Stage I vapor recovery system, the date ~~such part or parts were repaired or replaced~~ **the maintenance or repair was performed**, and a general description of the location of ~~the part or parts in the system~~ **of any part repaired or replaced**;

## VI. Conclusion

Based upon the comments addressed in this Hearing Report, I recommend the proposal be revised as recommended herein and that the recommended final proposal, included as Attachment 3 to this report, be submitted by the Commissioner for approval by the Attorney General and the Legislative Regulations Review Committee and upon adoption, be submitted to the EPA as a SIP revision.

/s/Robin D. Baena  
Robin D. Baena, Hearing Officer

3/19/2015  
Date

**ATTACHMENT 1**  
**STATEMENT PURSUANT TO SECTION 22a-6(h) OF THE GENERAL STATUTES:**  
**FEDERAL STANDARDS ANALYSIS**

Pursuant to section 22a-6(h) of the Connecticut General Statutes (CGS), the Commissioner of the Department of Energy and Environmental Protection (the Department) is authorized to adopt regulations pertaining to activities for which the federal government has adopted standards or procedures. At the time of public notice, the Commissioner must distinguish clearly all provisions of a regulatory proposal that differ from federal standards or procedures either within the regulatory language or through supplemental documentation accompanying the proposal. In addition, the Commissioner must provide an explanation for all such provisions in the regulation-making record required under CGS Title 4, Chapter 54 and make such explanation publicly available at the time of the publication of the notice of intent required under CGS section 4-168.

In accordance with the requirements of CGS section 22a-6(h), the following statement is entered into the administrative record in the matter of the proposed revisions to section 22a-174-20 of the Regulations of Connecticut State Agencies (RCSA), repeal of RCSA section 22a-174-30 and adoption of RCSA section 22a-174-30a.

The proposal primarily updates existing requirements concerned with the control of volatile organic compound (VOC) emissions from gasoline dispensing facilities (GDFs) so that the regulations conform to section 22a-174e of the Connecticut General Statutes (CGS), as revised by Public Act No. 13-120 in 2013. The Department is proposing to:

- Consolidate the Stage I<sup>1</sup> vapor recovery requirements contained in RCSA sections 22a-174-20(b) and 22a-174-30 into new proposed RCSA section 22a-174-30a;
- Incorporate existing federal requirements for controlling air emissions from gasoline delivery vehicles and GDFs (40 CFR 63 Subpart CCCCC) into RCSA sections 22a-174-20(b) and 22a-174-30a, respectively;
- Require the use of a California Air Resource Board (CARB)-approved pressure vacuum (P/V) valve upon valve replacement; and
- Remove the requirements for the installation and operation of Stage II<sup>2</sup> vapor recovery equipment at GDFs by repealing RCSA section 22a-174-30.

The Department performed a comparison of the proposal to analogous federal regulations. Stage I vapor recovery and gasoline delivery vehicle emissions control requirements are set out in 40 Code of Federal Regulations (CFR) 63 Subpart CCCCC, *National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities* and 40 CFR 63 Subpart BBBBBB, *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities*. The proposal incorporates requirements contained in 40 CFR 63 Subpart CCCCC and is consistent

---

1 Stage I vapor recovery systems divert the gasoline vapor displaced from a storage tank during refilling into the tanker compartment of the delivery vehicle.

2 Stage II vapor recovery systems control vapors during the refueling of vehicles by capturing the gasoline vapors displaced from the vehicles' gas tank and diverting them to the storage tank.

with both of these subparts in all aspects except the pressure/vacuum vent valve requirements. The requirement for a CARB-approved pressure/vacuum vent valve is more stringent than the federal pressure/vacuum vent valve requirements.

No federal regulations address Stage II vapor recovery at GDFs. Connecticut was required to implement its Stage II vapor recovery program under Clean Air Act (CAA) sections 182(b)(3) and 184(b)(2). CAA Section 202(a)(6) provides EPA with authority to waive the Stage II requirements when on-board refueling vapor recovery (ORVR) systems are determined to be in widespread use throughout the motor vehicle fleet. EPA made that determination, effective May 16, 2012, and waived the requirement that states implement Stage II vapor control programs (77 FR 28772). Under CAA section 110(l), removal of Stage II requirements must not interfere with attainment and reasonable further progress of the ozone national ambient air quality standards. Using the methods provided in EPA's guidance on removing Stage II gasoline vapor control programs from State Implementation Plans ([EPA-457/B-12-001](#)), DEEP concluded that termination of the state's Stage II vapor recovery program satisfies CAA requirements.

June 3, 2014  
Date

/s/Robin D. Baena  
Bureau of Air Management

## Attachment 2

### Proposal

#### **Section 1. Subdivision (7) of subsection (a) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:**

(7) The external surfaces of any storage tank containing VOCs with a vapor pressure of 0.75 pounds per square inch or greater under standard conditions that has a maximum capacity of 2,000 gallons (7,570 liters) or greater and is exposed to the rays of the sun shall be either mill-finished aluminum or painted and maintained white upon the next painting of the tank[,] or [upon being returned to service after being out of service for the first time after the effective date of this subsection] by March 7, 2024, whichever is sooner, [and no less than 10 years after the effective date of this subsection, except the] or upon being returned to service after being out of service. The requirement to use mill-finished aluminum or white paint shall not apply to words and logograms applied to the external surface of the storage tank for purposes of identification provided such symbols do not cover more than 20 percent of the external surface area of the tank's sides and top or more than 200 square feet (18.6 square meters), whichever is less.

#### **Sec 2. Subdivisions (6) through (16) of subsection (b) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:**

(6) [By December 31, 1982, any person who owns or operates any dispensing facility with a stationary storage tank for gasoline having a capacity of more than two thousand (2,000) gallons and a throughput of ten thousand (10,000) gallons or more per thirty (30) day period shall install at each stationary storage tank an approved control system. The applicability of this subdivision shall be based upon a thirty day rolling average and once a loading facility exceeds this limit, the requirements of this subdivision shall always apply.] Reserved.

(7) [After December 31, 1982, no person shall install any stationary storage tank for gasoline with a capacity of more than two hundred fifty (250) gallons and a throughput of ten thousand (10,000) gallons or more per thirty (30) day period unless the tank has an approved control system. The throughput of a loading facility shall be based upon a thirty day rolling average and once a loading facility exceeds this limit, the requirements of this subdivision shall always apply.] Reserved.

(8) [Effective May 31, 1983, no person shall transfer or allow the transfer of gasoline from a delivery vehicle to a stationary storage tank subject to the provisions of subdivisions (6) or (7) of this subsection unless:

- (A) the transfer is made through a properly maintained and operated approved control system which is in good working order, connected and operating; and
- (B) there are no leaks in pressure/vacuum relief valves and hatch covers of the delivery vehicle, nor in the truck tanks, storage tank or associated vapor and liquid lines during loading or unloading.] Reserved.

(9) [No person shall dispense gasoline to a stationary storage tank having an approved control system in such a manner as to impair the collection efficiency of the control system.] Reserved.

(10) The owner or operator of a delivery vehicle shall [ensure that]:

- (A) Design, operate and maintain the delivery vehicle [is designed and maintained] to be vapor-tight at all times;
- (B) Keep [the] all hatches [are] on the delivery vehicle closed and securely fastened at all times during loading and unloading operations;
- (C) Set the pressure relief valves [are set] to release at no less than 0.7 pounds per square inch; [and]
- (D) Refill the vapor laden delivery vehicle [is refilled] only at facilities which meet the requirements of subdivisions (2) or (5) of this subsection[.];
- (E) Properly connect all hoses in the vapor balance system prior to loading and unloading;
- (F) Maintain all vapor return hoses, couplers and adapters used in gasoline delivery to be vapor-tight;
- (G) Ensure all delivery vehicle vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the dispensing facility storage tank;
- (H) Dispense gasoline to a stationary storage tank having an approved control system in a manner that does not interfere with the collection efficiency of the control system;
- (I) Load and unload in a manner that does not cause the delivery vehicle tank to be subject to a pressure in excess of 18 inches of water or a vacuum in excess of 6 inches of water; and
- (J) Not transfer or allow the transfer of gasoline from a delivery vehicle to a dispensing facility stationary storage tank if there are leaks in pressure/vacuum relief valves or hatch covers of the delivery vehicle, in the truck tanks or in associated vapor and liquid lines.

(11) [The Commissioner may provide an exemption to the provisions of subdivisions (5) or (6) of this subsection for economic or technological impracticability. Any exemption granted under this subdivision shall require the approval of the Administrator.] Reserved.

(12) Any owner or operator of a delivery vehicle that receives gasoline from a loading facility described in subdivisions (2) or (5) of this subsection or delivers gasoline to a dispensing facility subject to the provisions of [subdivisions (6) or (7) of this subsection] section 22a-174-30a of the Regulations of Connecticut State Agencies [or any loading facility subject to subdivision (5) of this subsection] shall not cause or permit [a] such delivery vehicle to load or unload gasoline unless:

- (A) [such] The owner or operator tests the tank on such delivery vehicle once every twelve (12) months in accordance with Method 27 as set forth in Appendix A of Title 40 [Code of Federal Regulations Part] CFR 60 or another manner accepted by the Administrator and approved by the Commissioner in accordance with section 22a-174-5 of the Regulations of Connecticut State Agencies;
- (B) [Repealed;

- (C) during] During the test specified in subparagraph (A) of this subdivision, the tank sustains a pressure change of no more than three (3) inches of water in five (5) minutes when pressurized to a gauge pressure of eighteen (18) inches of water or when evacuated to a gauge pressure of six (6) inches of water; [and]
- [(D)](C) [the] The delivery vehicle displays a marking near the U.S. Department of Transportation markings required by Title 49 [of the Code of Federal Regulations Section] CFR 177.824 which shows the initials “DEEP” or “DEP” and the date of the last test or comparable markings as required by either the Connecticut Department of Transportation or the Connecticut Department of Motor Vehicles[.]; and
- (D) Records of all tests performed under this subdivision shall be maintained for a minimum of five (5) years and made available to the Commissioner within three (3) business days after the Commissioner requests such records.
- (13) The owner or operator of any delivery vehicle [which] that fails to meet the requirements of [subdivisions] subdivision (12) [or (14)] of this subsection shall repair and retest such vehicle within fifteen (15) days.
- (14) Any person who performs a test required by subdivision (12) of this subsection shall[:
- (A)] notify the Department's [Air Compliance Unit] Bureau of Air Management, Field Operations Section of the time and location of the test at least forty-eight (48) hours in advance[; and
- (B) submit a copy of the test report to the Commissioner within ten (10) days after performing a test].
- (15) [The owner or operator of any delivery vehicle subject to the provisions of subdivision (12) of this subsection shall ensure that:
- (A) during loading and unloading operations the tank is not subject to a pressure in excess of eighteen (18) inches of water, nor a vacuum in excess of six (6) inches of water;
- (B) during loading and unloading operations there are no visible liquid leaks and there is never a reading equal to or greater than the Lower Explosive Limit (LEL, measured as propane) at one (1) inch from any source of potential leaks as detected by a combustible gas detector using the test procedure described in Appendix B to “Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems” (EPA-450/2-78-051); and
- (C) records of all tests performed under subdivision (12) of this subsection are maintained for a minimum of five (5) years.] The Commissioner may test a delivery vehicle during loading and unloading operations to evaluate its vapor-tightness by measuring the vapor concentration at a distance of one inch from the source with a combustible gas detector, calibrated with propane using the test procedure described in CARB TP-204.3, *Determination of Leaks*. Equipment is vapor-tight when a measured vapor concentration is less than 14,000 parts per million.

(16) The owner or operator of any loading facility[, dispensing facility] or delivery vehicle subject to the provisions of this subsection shall:

- (A) [within six (6) months of the effective date of this subdivision, develop] Develop a written operation and maintenance (O&M) plan for any equipment used to load or unload gasoline;
- (B) [within twelve (12) months of the effective date of this subdivision, develop] Develop a formal training program implementing the O&M plan for any person who receives gasoline from a loading facility described in subdivisions (2) or (5) of this subsection or delivers gasoline to a dispensing facility subject to the provisions of [subdivisions (6) or (7) of this subsection] section 22a-174-30a of the Regulations of Connecticut State Agencies or any loading facility subject to subdivision (5) of this subsection;
- (C) Maintain a copy of the O&M plan and training program materials at the subject facility; and
- [(C)] (D) [make and keep] Maintain monthly records demonstrating implementation of the O&M plan, including records of persons completing the training program required by subparagraph (B) of the subdivision, at the subject facility[; and]. All such records shall be:
  - (i) Made available to the Commissioner to inspect and copy upon request, and
  - (ii) Maintained for five (5) years from the date such record is created.
- [(D)] maintain such records at the subject facility for a period of five [(5)] years, and provide such records to the commissioner upon request.]

**Sec. 3. The Regulations of Connecticut State Agencies are amended by adding section 22a-174-30a as follows:**

**(NEW)**

**Section 22a-174-30a. Stage I Vapor Recovery.**

(a) **Definitions.** For the purposes of this section, the definitions provided in this subsection shall apply. Terms used in this section that are not defined in this subsection are as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.

- (1) “CARB” means the State of California Air Resources Board;
- (2) “CARB-approved” means a Stage I vapor recovery system or system component that is or has been tested and approved by CARB or that is or has been tested and approved by another state using testing methods approved by CARB;
- (3) “Delivery elbow” means a quick connect/disconnect type coupler that joins a hose from a delivery vehicle to a GDF’s storage tank riser pipe adaptor or coupler;

- (4) “Delivery vehicle” means a tank truck, tank-equipped trailer, railroad tank car, or other mobile source equipped with a storage tank used for the transportation of gasoline from a source of supply to any stationary storage tank;
- (5) “Gasoline” means any petroleum distillate or petroleum distillate and alcohol blend commercially known or sold as “gasoline” and commonly used as an internal combustion engine fuel;
- (6) “Gasoline dispensing facility” or “GDF” means any site where gasoline is transferred to motor vehicles from a stationary storage tank with a capacity of 250 gallons or more;
- (7) “Modified” means a gasoline storage tank with a capacity of 250 gallons or more located at a GDF or any component fixed to such gasoline storage tank that has been added, altered, replaced or retrofitted. Components of a gasoline storage tank include, but are not limited to, piping that contains gasoline or gasoline vapors and containments located over or on the gasoline storage tank;
- (8) “Stage I vapor recovery system” means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading delivery vehicle and a receiving GDF storage tank such that vapors displaced from the GDF storage tank are transferred to the delivery vehicle tank;
- (9) “Throughput” means the number of gallons of gasoline delivered into motor vehicles at a GDF over a specified period of time;
- (10) “Two-point Stage I vapor recovery system” means a GDF storage tank possessing an entry port for a gasoline fill pipe and a separate exit port for a vapor-return connection; and
- (11) "Vapor-tight" means not capable of allowing the passage of gases at the pressures encountered.

**(b) Applicability.**

- (1) On and after July 1, 2015, the provisions of this section apply to:
  - (A) The owner or operator of any GDF that has a throughput of 10,000 gallons or more, based on a 30-day aggregate; and
  - (B) The owner or operator of any GDF that was subject to the requirements of former section 22a-174-30 of the Regulations of Connecticut State Agencies.
- (2) If a GDF exceeds a throughput of 10,000 gallons during any 30-day rolling period, the requirements of this section shall always apply.
- (3) For a GDF with multiple storage tanks, the requirements of this section apply only to a storage tank with a capacity of 250 gallons or greater.

(c) **Requirements.**

- (1) No owner or operator of a GDF shall transfer or allow the transfer of gasoline between a delivery vehicle and a GDF stationary storage tank unless such stationary storage tank is equipped with:
  - (A) A CARB-approved fill adapter; and
  - (B) A pressure/vacuum vent valve on the GDF storage tank vent pipes.
- (2) Any pressure/vacuum vent valve installed on and after July 1, 2015 shall be a CARB-approved pressure/vacuum vent valve.
- (3) The pressure specifications for any pressure/vacuum vent valve shall be as follows:
  - (A) For any pressure/vacuum vent valve installed prior to July 1, 2015:
    - (i) A positive pressure setting of:
      - (III) 3 inches of water, plus or minus 1/2 inch, or
      - (IV) 2.5 to 6.0 inches of water, and
    - (ii) A vacuum setting of 8 inches of water, plus or minus 2 inches; and
  - (B) For any pressure/vacuum vent valve installed on and after July 1, 2015:
    - (i) A positive pressure setting of 2.5 to 6.0 inches of water,
    - (ii) A negative pressure setting of 6.0 to 10.0 inches of water, and
    - (iii) The total leak rate of all pressure/vacuum vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
- (4) Except as provided in subdivision (5) of this subsection, a GDF storage tank shall be equipped with a two-point Stage I vapor recovery system. The vapor exit port of the two-point Stage I vapor recovery system shall be designed and maintained to seal in a manner that will prevent the discharge of gasoline vapors to the atmosphere when the vapor return hose is disconnected.
- (5) An owner or operator of any GDF storage tank that does not have an available port to install a two-point Stage I vapor recovery system shall install a two-point Stage I vapor recovery system when the GDF storage tank is replaced or when the product in the tank is switched from any other fuel to gasoline.
- (6) In addition to the requirements of subdivisions (1) through (5) of this subsection, an owner or operator of any GDF that has a throughput of 100,000 gallons or more, based on a 30-day aggregate, shall install, operate and maintain a Stage I vapor recovery system

that meets the requirements of subparagraphs (A) through (F) of this subdivision. If a GDF exceeds a throughput of 100,000 gallons during any 30-day rolling period, the requirements of this subdivision shall always apply.

- (A) All vapor line connections on the GDF storage tank shall be equipped with closures that seal upon disconnect;
- (B) The Stage I vapor control system shall be designed such that the pressure in the delivery vehicle tank does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer;
- (C) The vapor recovery and product adaptors and the method of connection with the delivery elbow shall be designed to prevent the over-tightening or loosening of fittings during normal delivery operations;
- (D) If a gauge well is separate from the fill tube, the gauge well shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as the fill pipe;
- (E) Liquid fill connections and vapor couplings shall be equipped with vapor-tight caps; and
- (F) The Stage I vapor recovery system shall be capable of meeting the static pressure performance requirement of the following equation when pressure decay testing is performed as required by subsection (d) of this section:

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

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.

**(d) Testing**

- (1) The owner or operator shall conduct each of the following tests at least once per calendar year:
  - (A) For every pressure/vacuum vent valve, a pressure/vacuum vent valve test as specified in subdivision (4) of this subsection;
  - (B) A pressure decay test as specified in subdivision (5) of this subsection; and
  - (C) A vapor-space tie-in test as specified in subdivision (6) of this subsection.
- (2) Any GDF constructed on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of initial operation.
- (3) Any GDF modified on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of completion of the modification.

- (4) Pressure/vacuum vent valve tests shall be conducted according to the current version of CARB TP-201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.
  - (5) Pressure decay tests shall be conducted according to the current version of CARB TP-201.3, *Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.
  - (6) Vapor-space tie-in tests shall be conducted according to the current version of CARB TP-201.3C, *Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test)*, as may be revised from time to time, or another method test approved by the Commissioner and the Administrator.
  - (7) Any owner or operator shall:
    - (A) Notify the Department's Bureau of Air Management, Field Operations Section in writing of the time and location of a test required by subdivision (1) of this subsection at least seven (7) business days in advance; and
    - (B) Submit a copy of the test report on a form provided by the Department to the Department's Bureau of Air Management, Field Operations Section within ten (10) days after performing a test required by this subsection.
  - (8) If an owner or operator fails any test required by this subsection, the owner or operator shall take corrective actions and retest no later than sixty (60) days after failing the test.
- (e) **Record keeping.**
- (1) Any owner or operator of a GDF shall maintain the following records:
    - (A) All licenses, as that term is defined in section 4-166 of the Connecticut General Statutes, to construct or operate the GDF or to construct or operate a specific system at the GDF;
    - (B) All records and results of tests performed pursuant to subsection (d) of this section, including the date of the testing and the names, addresses, and phone numbers of the persons who performed the tests;
    - (C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance problem, identification of any part or parts repaired or replaced on such Stage I vapor recovery system, the date such part or parts were repaired or replaced, and a general description of the location of the part or parts in the system;
    - (D) A chronological file of all inspection reports issued by a representative of the Commissioner or the Administrator for inspections performed at the GDF; and

- (E) A chronological file of all compliance records, including orders, warnings and notices of violations, issued by a representative of the Commissioner or the Administrator.
- (2) Records required by this subsection shall be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner no later than three (3) business days after receiving such a request.
- (3) Records shall be maintained for five (5) years from the date of creation.
- (4) An owner or operator shall display in a conspicuous location at the GDF the address at which the records required by subdivision (1) of this subsection are maintained.

**Sec. 4. As of July 1, 2015, section 22a-174-30 of the Regulations of Connecticut State Agencies is repealed.**

**Statement of purpose:** The primary purpose of this proposal is to remove Stage II vapor recovery requirements from the Regulations of Connecticut State Agencies (RCSA) so the regulations reflect the state's vapor recovery program for gasoline dispensing facilities (GDFs) as set out in section 22a-174e of the Connecticut General Statutes (CGS). Stage II vapor recovery systems control vapors during the refueling of vehicles by capturing the gasoline vapors displaced from the vehicles' gas tank and diverting the vapors to the storage tank at the GDF. Connecticut's Stage II vapor recovery program for GDFs was authorized by CGS section 22a-174e, as that section was in effect prior to June 18, 2013. In the 2013 legislative session, CGS section 22a-174e was revised by Public Act No. 13-120.<sup>1</sup> While former CGS section 22a-174e required installation of Stage II vapor recovery equipment at GDFs, Public Act No. 13-120 mandates the decommissioning of existing Stage II vapor recovery equipment and prohibits the installation of new Stage II vapor recovery equipment at GDFs. RCSA section 22a-174-30 was adopted under the authority of CGS section 22a-174e in 1992 and sets out the details of Connecticut's Stage II vapor recovery program. This proposal repeals RCSA section 22a-174-30 (section 4).

Stage I vapor recovery systems control vapors during the transfer of gasoline from a delivery vehicle to the storage tank at a GDF by diverting the displaced gasoline vapor from the GDF storage tank into the tanker compartment of the delivery vehicle unloading gasoline. Some elements of Connecticut's Stage I vapor recovery program are contained in RCSA section 22a-174-30 and others are in RCSA section 22a-174-20(b). Since the Stage I vapor recovery program must be retained as an ozone control program under the Clean Air Act, the proposal moves and consolidates those requirements to new RCSA section 22a-174-30a (sections 2 & 3). New RCSA section 22a-174-30a is drafted to be consistent with the federal requirements for controlling air emissions at GDFs (*see* 40 CFR 63 Subpart CCCCC) and Public Act No. 13-120. The only requirement new to a GDF owner, which is not a requirement of 40 CFR 63 Subpart CCCCC or Public Act No. 13-120, is the requirement to use a California Air Resource Board-approved pressure/vacuum vent valve upon valve replacement.

---

<sup>1</sup> Public Act No. 13-120, *An Act Concerning Gasoline Vapor Recovery Systems*.  
<http://www.cga.ct.gov/2013/ACT/pa/pdf/2013PA-00120-R00HB-06534-PA.pdf>.

The proposal also revises RCSA section 22a-174-20(a)(7) to correct and clarify the requirements for the external surfaces of aboveground storage tanks containing volatile organic compounds (section 1).

### Attachment 3

## Final Text of the Proposal, Based on Recommendations in the Hearing Officer's Report

### Section 1. Subdivision (7) of subsection (a) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(7) The external surfaces of any storage tank containing VOCs with a vapor pressure of 0.75 pounds per square inch or greater under standard conditions that has a maximum capacity of 2,000 gallons (7,570 liters) or greater and is exposed to the rays of the sun shall be either mill-finished aluminum or painted and maintained white upon the next painting of the tank[,] or [upon being returned to service after being out of service for the first time after the effective date of this subsection] by March 7, 2024, whichever is sooner, [and no less than 10 years after the effective date of this subsection, except the] or upon being returned to service after being out of service. The requirement to use mill-finished aluminum or white paint shall not apply to words and logograms applied to the external surface of the storage tank for purposes of identification provided such symbols do not cover more than 20 percent of the external surface area of the tank's sides and top or more than 200 square feet (18.6 square meters), whichever is less.

### Sec 2. Subdivisions (6) through (16) of subsection (b) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(6) [By December 31, 1982, any person who owns or operates any dispensing facility with a stationary storage tank for gasoline having a capacity of more than two thousand (2,000) gallons and a throughput of ten thousand (10,000) gallons or more per thirty (30) day period shall install at each stationary storage tank an approved control system. The applicability of this subdivision shall be based upon a thirty day rolling average and once a loading facility exceeds this limit, the requirements of this subdivision shall always apply.] Reserved.

(7) [After December 31, 1982, no person shall install any stationary storage tank for gasoline with a capacity of more than two hundred fifty (250) gallons and a throughput of ten thousand (10,000) gallons or more per thirty (30) day period unless the tank has an approved control system. The throughput of a loading facility shall be based upon a thirty day rolling average and once a loading facility exceeds this limit, the requirements of this subdivision shall always apply.] Reserved.

(8) [Effective May 31, 1983, no person shall transfer or allow the transfer of gasoline from a delivery vehicle to a stationary storage tank subject to the provisions of subdivisions (6) or (7) of this subsection unless:

- (A) the transfer is made through a properly maintained and operated approved control system which is in good working order, connected and operating; and
- (B) there are no leaks in pressure/vacuum relief valves and hatch covers of the delivery vehicle, nor in the truck tanks, storage tank or associated vapor and liquid lines during loading or unloading.] Reserved.

(9) [No person shall dispense gasoline to a stationary storage tank having an approved control system in such a manner as to impair the collection efficiency of the control system.] Reserved.

- (10) The owner or operator of a delivery vehicle shall [ensure that]:
- (A) Design, operate and maintain the delivery vehicle [is designed and maintained] to be vapor-tight at all times;
  - (B) Keep [the] all hatches [are] on the delivery vehicle closed and securely fastened at all times during loading and unloading operations;
  - (C) Set the pressure relief valves [are set] to release at no less than 0.7 pounds per square inch; [and]
  - (D) Refill the vapor laden delivery vehicle [is refilled] only at facilities which meet the requirements of subdivisions (2) or (5) of this subsection[.];
  - (E) Properly connect all hoses in the vapor balance system prior to loading and unloading;
  - (F) Maintain all vapor return hoses, couplers and adapters used in gasoline delivery to be vapor-tight;
  - (G) Ensure all delivery vehicle vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the dispensing facility storage tank;
  - (H) Dispense gasoline to a stationary storage tank having an approved control system in a manner that does not interfere with the collection efficiency of the control system;
  - (I) Load and unload in a manner that does not cause the delivery vehicle tank to be subject to a pressure in excess of 18 inches of water or a vacuum in excess of 6 inches of water; and
  - (J) Not transfer or allow the transfer of gasoline from a delivery vehicle to a dispensing facility stationary storage tank if there are leaks in pressure/vacuum relief valves or hatch covers of the delivery vehicle, in the truck tanks or in associated vapor and liquid lines.

(11) [The Commissioner may provide an exemption to the provisions of subdivisions (5) or (6) of this subsection for economic or technological impracticability. Any exemption granted under this subdivision shall require the approval of the Administrator.] Reserved.

(12) Any owner or operator of a delivery vehicle that receives gasoline from a loading facility described in subdivisions (2) or (5) of this subsection or delivers gasoline to a dispensing facility subject to the provisions of [subdivisions (6) or (7) of this subsection] section 22a-174-30a of the Regulations of Connecticut State Agencies [or any loading facility subject to subdivision (5) of this subsection] shall not cause or permit [a] such delivery vehicle to load or unload gasoline unless:

- (A) [such] The owner or operator tests the tank on such delivery vehicle once every twelve (12) months in accordance with Method 27 as set forth in Appendix A of Title 40 [Code of Federal Regulations Part] CFR 60 or another manner accepted by the Administrator and approved by the Commissioner in accordance with section 22a-174-5 of the Regulations of Connecticut State Agencies;
- (B) [Repealed;

- (C) during] During the test specified in subparagraph (A) of this subdivision, the tank sustains a pressure change of no more than three (3) inches of water in five (5) minutes when pressurized to a gauge pressure of eighteen (18) inches of water or when evacuated to a gauge pressure of six (6) inches of water; [and]
- [(D)](C) [the] The delivery vehicle displays a marking near the U.S. Department of Transportation markings required by Title 49 [of the Code of Federal Regulations Section] CFR 177.824 which shows the initials “DEEP” or “DEP” and the date of the last test or comparable markings as required by either the Connecticut Department of Transportation or the Connecticut Department of Motor Vehicles[.]; and
- (D) Records of all tests performed under this subdivision shall be maintained for a minimum of five (5) years and made available to the Commissioner within three (3) business days after the Commissioner requests such records.
- (13) The owner or operator of any delivery vehicle [which] that fails to meet the requirements of [subdivisions] subdivision (12) [or (14)] of this subsection shall repair and retest such vehicle within fifteen (15) days or take such vehicle out of service. Prior to returning such vehicle to service, the owner or operator shall repair and retest the vehicle.
- (14) Any person who performs a test required by subdivision (12) or (13) of this subsection shall[:
- (A)] notify the Department's [Air Compliance Unit] Bureau of Air Management, Field Operations Section of the time and location of the test at least forty-eight (48) hours in advance[; and
- (B) submit a copy of the test report to the Commissioner within ten (10) days after performing a test].
- (15) [The owner or operator of any delivery vehicle subject to the provisions of subdivision (12) of this subsection shall ensure that:
- (A) during loading and unloading operations the tank is not subject to a pressure in excess of eighteen (18) inches of water, nor a vacuum in excess of six (6) inches of water;
- (B) during loading and unloading operations there are no visible liquid leaks and there is never a reading equal to or greater than the Lower Explosive Limit (LEL, measured as propane) at one (1) inch from any source of potential leaks as detected by a combustible gas detector using the test procedure described in Appendix B to “Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems” (EPA-450/2-78-051); and
- (C) records of all tests performed under subdivision (12) of this subsection are maintained for a minimum of five (5) years.] The Commissioner may test a delivery vehicle during loading and unloading operations to evaluate its vapor-tightness by measuring the vapor concentration at a distance of one inch from the source with a combustible gas detector, calibrated with propane using the test procedure described in CARB TP-204.3, *Determination of Leaks*. Equipment is

vapor-tight when a measured vapor concentration is less than 14,000 parts per million.

(16) The owner or operator of any loading facility[, dispensing facility] or delivery vehicle subject to the provisions of this subsection shall:

- (A) [within six (6) months of the effective date of this subdivision, develop] Develop a written operation and maintenance (O&M) plan for any equipment used to load or unload gasoline;
- (B) [within twelve (12) months of the effective date of this subdivision, develop] Develop a formal training program implementing the O&M plan for any person who receives gasoline from a loading facility described in subdivisions (2) or (5) of this subsection or delivers gasoline to a dispensing facility subject to the provisions of [subdivisions (6) or (7) of this subsection] section 22a-174-30a of the Regulations of Connecticut State Agencies or any loading facility subject to subdivision (5) of this subsection;
- (C) Maintain a copy of the O&M plan and training program materials at the subject facility; and
- [(C)] (D) [make and keep] Maintain monthly records demonstrating implementation of the O&M plan, including records of persons completing the training program required by subparagraph (B) of the subdivision, at the subject facility[; and]. All such records shall be:
  - (i) Made available to the Commissioner to inspect and copy upon request, and
  - (ii) Maintained for five (5) years from the date such record is created.
- [(D)] maintain such records at the subject facility for a period of five [(5)] years, and provide such records to the commissioner upon request.]

**Sec. 3. The Regulations of Connecticut State Agencies are amended by adding section 22a-174-30a as follows:**

**(NEW)**

**Section 22a-174-30a. Stage I Vapor Recovery.**

(a) **Definitions.** For the purposes of this section, the definitions provided in this subsection shall apply. Terms used in this section that are not defined in this subsection are as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.

- (1) “CARB” means the State of California Air Resources Board;
- (2) “CARB-approved” means a Stage I vapor recovery system or system component that is or has been tested and approved by CARB as an individual component or as part of an approved system or that is or has been tested and approved by another state using testing methods approved by CARB;

- (3) “Construct” means to install or replace all storage tanks with a capacity greater than 250 gallons, the product piping and the vent piping at a GDF during a single project;
- (4) “Delivery elbow” means a quick connect/disconnect type coupler that joins a hose from a delivery vehicle to a GDF’s storage tank riser pipe adaptor or coupler;
- (5) “Delivery vehicle” means a tank truck, tank-equipped trailer, railroad tank car, or other mobile source equipped with a storage tank used for the transportation of gasoline from a source of supply to any stationary storage tank;
- (6) “Gasoline” means any petroleum distillate or petroleum distillate and alcohol blend commercially known or sold as “gasoline” and commonly used as an internal combustion engine fuel;
- (7) “Gasoline dispensing facility” or “GDF” means any site where gasoline is transferred to motor vehicles from a stationary storage tank with a capacity of 250 gallons or more;
- (8) “Modified” means the addition, alteration, replacement or retrofit of a gasoline storage tank located at a GDF or any component fixed to such gasoline storage tank. Components of a gasoline storage tank include, but are not limited to, piping that contains gasoline or gasoline vapors and containments located over or on the gasoline storage tank;
- (9) “Stage I vapor recovery system” means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading delivery vehicle and a receiving GDF storage tank such that vapors displaced from the GDF storage tank are transferred to the delivery vehicle tank;
- (10) “Throughput” means the number of gallons of gasoline delivered into motor vehicles at a GDF over a specified period of time;
- (11) “Two-point Stage I vapor recovery system” means a GDF storage tank possessing an entry port for a gasoline fill pipe and a separate exit port for a vapor-return connection; and
- (12) "Vapor-tight" means not capable of allowing the passage of gases at the pressures encountered.

**(b) Applicability.**

- (1) This section applies to the owner or operator of any GDF that has a monthly throughput of 10,000 gallons or more on or after July 1, 2015. If a monthly throughput of 10,000 gallons is exceeded, the requirements of this section shall thereafter apply.
- (2) Monthly throughput shall be calculated by adding the volume of gasoline dispensed at the GDF during the current day with the volume of gasoline dispensed at the GDF during the previous 364 days, and dividing that sum by 12. For any GDF constructed after July 1, 2014, the initial calculation of monthly throughput shall be performed on or after 365 days after the date the GDF starts dispensing gasoline to motor vehicles.

- (3) For a GDF with multiple storage tanks, the requirements of this section apply only to a storage tank with a capacity of 250 gallons or greater.
  - (4) The owner or operator of a GDF that does not meet the monthly throughput requirements of subdivision (1) of this subsection shall maintain a chronological register of daily throughput of gasoline to demonstrate that this section does not apply. Such records shall be maintained for five (5) years from the date of creation and be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner no later than three (3) business days after receiving such a request.
- (c) Requirements.**
- (1) No owner or operator of a GDF shall transfer or allow the transfer of gasoline between a delivery vehicle and a GDF stationary storage tank unless such stationary storage tank is equipped with a Stage I vapor recovery system that includes:
    - (A) A CARB-approved fill adapter; and
    - (B) A pressure/vacuum vent valve on each GDF storage tank vent pipe.
  - (2) Any pressure/vacuum vent valve installed on and after July 1, 2015 shall be a CARB-approved pressure/vacuum vent valve.
  - (3) The pressure specifications for any pressure/vacuum vent valve shall be as follows:
    - (A) For any pressure/vacuum vent valve installed prior to July 1, 2015:
      - (i) A positive pressure setting of:
        - (I) 3.0 inches of water, plus or minus 0.5 inch, or
        - (II) 2.5 to 6.0 inches of water, and
      - (ii) A vacuum setting of 8.0 inches of water, plus or minus 2.0 inches; and
    - (B) For any pressure/vacuum vent valve installed on and after July 1, 2015:
      - (i) A positive pressure setting of 2.5 to 6.0 inches of water,
      - (ii) A negative pressure setting of 6.0 to 10.0 inches of water, and
      - (iii) The total leak rate of all pressure/vacuum vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
  - (4) Except as provided in subdivision (5) of this subsection, a GDF storage tank shall be equipped with a two-point Stage I vapor recovery system. The vapor exit port of the two-point Stage I vapor recovery system shall be designed and maintained to seal in a manner

that will prevent the discharge of gasoline vapors to the atmosphere when the vapor return hose is disconnected.

- (5) An owner or operator of any GDF storage tank that does not have an available port to install a two-point Stage I vapor recovery system shall install a two-point Stage I vapor recovery system when the GDF storage tank is replaced or when the product in the tank is switched from any other fuel to gasoline.
- (6) In addition to the requirements of subdivisions (1) through (5) of this subsection, an owner or operator of any GDF that has a monthly throughput of 100,000 gallons or more shall install, operate and maintain a Stage I vapor recovery system that meets the requirements of subparagraphs (A) through (F) of this subdivision. If a GDF exceeds a monthly throughput of 100,000 gallons, the requirements of this subdivision shall always apply.
- (A) All vapor line connections on the GDF storage tank shall be equipped with closures that seal upon disconnect;
- (B) The Stage I vapor control system shall be designed such that the pressure in the delivery vehicle tank does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer;
- (C) The vapor recovery and product adaptors and the method of connection with the delivery elbow shall be designed to prevent the over-tightening or loosening of fittings during normal delivery operations;
- (D) If a gauge well is separate from the fill tube, the gauge well shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as the fill pipe;
- (E) Liquid fill connections and vapor couplings shall be equipped with vapor-tight caps; and
- (F) The Stage I vapor recovery system shall be capable of meeting the static pressure performance requirement of the following equation when pressure decay testing is performed as required by subsection (d) of this section:

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

Where:

P<sub>f</sub> = Minimum allowable final pressure, inches of water

v = Total ullage affected by the test, gallons

e = Dimensionless constant equal to approximately 2.718.

**(d) Testing.**

- (1) The owner or operator of any GDF shall conduct each of the following tests at least once per calendar year:

- (A) For every pressure/vacuum vent valve, a pressure/vacuum vent valve test as specified in subdivision (4) of this subsection;
  - (B) A pressure decay test as specified in subdivision (5) of this subsection; and
  - (C) A vapor-space tie-in test as specified in subdivision (7) of this subsection.
- (2) The owner or operator of any GDF constructed on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of initial operation.
- (3) The owner or operator of any GDF modified on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of completion of the modification.
- (4) Pressure/vacuum vent valve tests shall be conducted according to the current version of CARB TP-201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.
- (5) Pressure decay tests shall be conducted according to the current version of CARB TP-201.3, *Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.
- (6) The owner or operator of any GDF subject to 40 CFR 63.11120 may use the test methods specified in 40 CFR 63.11120 in lieu of the method specified in subdivision (4) or subdivision (5) of this subsection.
- (7) Vapor-space tie-in tests shall be conducted according to the current version of CARB TP-201.3C, *Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test)*, as may be revised from time to time, or another method test approved by the Commissioner and the Administrator.
- (8) The owner or operator of any GDF who has installed a pressure management or vapor control device on a storage tank with a capacity of 250 gallons or greater, other than a device that is required to be installed and tested by this section, shall test such device annually by a method approved by the commissioner. At least sixty (60) days prior to conducting an annual test, the owner or operator shall submit a test protocol for review and approval on a form provided by the commissioner.
- (9) Any owner or operator shall:
- (A) Notify the Department's Bureau of Air Management, Field Operations Section in writing of the time and location of a test required by this subsection at least seven (7) business days in advance; and
  - (B) Submit a copy of the test report on a form provided by the Department to the Department's Bureau of Air Management, Field Operations Section within ten (10) days after performing a test required by this subsection.

(10) If an owner or operator fails any test required by this subsection, the owner or operator shall take corrective actions and retest no later than sixty (60) days after failing the test.

**(e) Record keeping.**

(1) Any owner or operator of a GDF shall maintain the following records:

- (A) All licenses, as that term is defined in section 4-166 of the Connecticut General Statutes, to construct or operate the GDF or to construct or operate a specific system at the GDF;
- (B) All records and results of tests performed pursuant to subsection (d) of this section, including the date of the testing and the names, addresses, and phone numbers of the persons who performed the tests;
- (C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance or repair performed, identification of any part repaired or replaced on such Stage I vapor recovery system, the dates the maintenance or repair was performed, and a general description of the location of any part repaired or replaced;
- (D) A chronological file of all inspection reports issued by a representative of the Commissioner or the Administrator for inspections performed at the GDF;
- (E) A chronological file of all compliance records, including orders, warnings and notices of violations, issued by a representative of the Commissioner or the Administrator; and
- (F) A chronological register of daily throughput of gasoline.

(2) In addition to the applicable records required by subdivision (1) of this subsection, any owner or operator of a GDF constructed after July 1, 2014 shall maintain records of the dates of the construction and the date gasoline was first dispensed to a motor vehicle.

(3) Records required by this subsection shall be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner no later than three (3) business days after receiving such a request.

(4) Records shall be maintained for five (5) years from the date of creation.

(5) An owner or operator shall display in a conspicuous location at the GDF the address at which the records required by subdivision (1) of this subsection are maintained.

**Sec. 4. As of July 1, 2015, section 22a-174-30 of the Regulations of Connecticut State Agencies is repealed.**

**Statement of purpose:** The primary purpose of this proposal is to remove Stage II vapor recovery requirements from the Regulations of Connecticut State Agencies (RCSA) so the regulations reflect the state's vapor recovery program for gasoline dispensing facilities (GDFs)

as set out in section 22a-174e of the Connecticut General Statutes (CGS). Stage II vapor recovery systems control vapors during the refueling of vehicles by capturing the gasoline vapors displaced from the vehicles' gas tank and diverting the vapors to the storage tank at the GDF. Connecticut's Stage II vapor recovery program for GDFs was authorized by CGS section 22a-174e, as that section was in effect prior to June 18, 2013. In the 2013 legislative session, CGS section 22a-174e was revised by Public Act No. 13-120.<sup>1</sup> While former CGS section 22a-174e required installation of Stage II vapor recovery equipment at GDFs, Public Act No. 13-120 mandates the decommissioning of existing Stage II vapor recovery equipment and prohibits the installation of new Stage II vapor recovery equipment at GDFs. RCSA section 22a-174-30 was adopted under the authority of CGS section 22a-174e in 1992 and sets out the details of Connecticut's Stage II vapor recovery program. This proposal repeals RCSA section 22a-174-30 (section 4).

Stage I vapor recovery systems control vapors during the transfer of gasoline from a delivery vehicle to the storage tank at a GDF by diverting the displaced gasoline vapor from the GDF storage tank into the tanker compartment of the delivery vehicle unloading gasoline. Some elements of Connecticut's Stage I vapor recovery program are contained in RCSA section 22a-174-30 and others are in RCSA section 22a-174-20(b). Since the Stage I vapor recovery program must be retained as an ozone control program under the Clean Air Act, the proposal moves and consolidates those requirements to new RCSA section 22a-174-30a (sections 2 & 3). New RCSA section 22a-174-30a is drafted to be consistent with the federal requirements for controlling air emissions at GDFs (*see* 40 CFR 63 Subpart CCCCCC) and Public Act No. 13-120. The only requirement new to a GDF owner, which is not a requirement of 40 CFR 63 Subpart CCCCCC or Public Act No. 13-120, is the requirement to use a California Air Resource Board-approved pressure/vacuum vent valve upon valve replacement.

The proposal also revises RCSA section 22a-174-20(a)(7) to correct and clarify the requirements for the external surfaces of aboveground storage tanks containing volatile organic compounds (section 1).

---

1 Public Act No. 13-120, *An Act Concerning Gasoline Vapor Recovery Systems*.  
<http://www.cga.ct.gov/2013/ACT/pa/pdf/2013PA-00120-R00HB-06534-PA.pdf>.