Department of Natural Resources and Environmental Control

Public Workshop

Revision to Regulation for Control of Gasoline Vapor Emissions at Gasoline Dispending Facilities

Division of Air Quality

October 15 and 16, 2019

Blue Skies Delaware; Clean Air for Life

Agenda

1. Introduction and background
2. The 2015 Stage II rule
3. Draft 2019 Section 36 revision
4. Draft 2019 Section 26 revision
5. Delaware State Implementation Plan (SIP) revision for the 2019 Sections 26/36 revision
6. Discussion
7. Next steps

Purpose of this Workshop

- **Present proposed amendments to Air Regulation 1124 Sections 26 and 36:**
  - The proposed amendments are based on 4 monthly review committee meetings from May to August, 2019.
  - The review committee consisted of representatives from industry, environmental groups, and regulatory agencies.
  - All committee meetings were announced to the public in advance.

1. Introduction and Background

- *7 **DE Admin. Code** 1124 "Control of Volatile Organic Compound Emissions"*
  - *Commonly known as "Air Regulation 1124"*

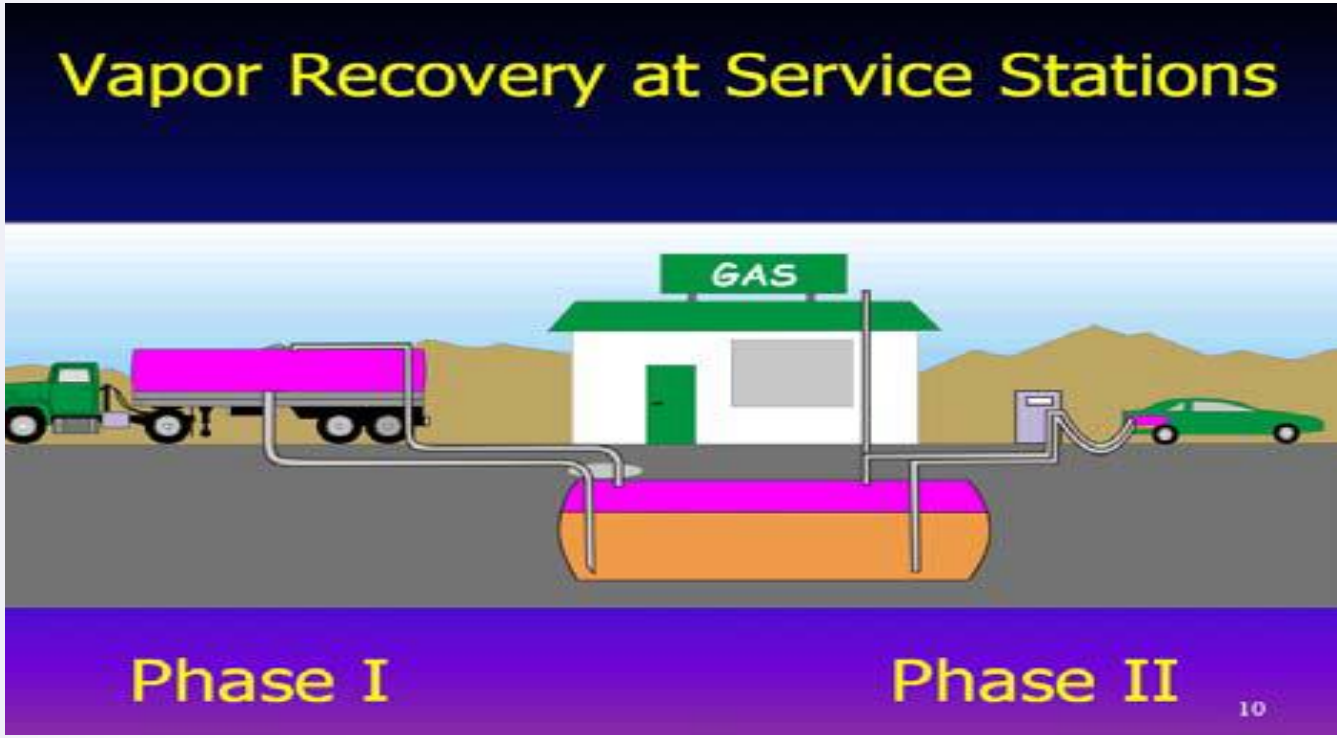
    - *Section 26 "Gasoline Dispensing Facility Stage I Vapor Recovery"*
      - *Commonly known as "Stage I rule"*

    - *Section 36 "Vapor Emission Control at Gasoline Dispensing Facilities"*
      - *Commonly known as "Stage II rule"*

- **Why is Delaware amending Section 26 and Section 36?**
  - To control gasoline vapor emissions at gasoline dispending facilities (GDFs).
- **Why control gasoline vapor?**
  - It is contributing to formation of ozone (O_3, i.e., smog) in the air.
  - Smog is harmful to public health and welfare.
  - Gasoline vapor contains air toxics.

Control gasoline vapor emissions at Gasoline Dispensing Facilities (GDFs): Stage I and Stage II

Gasoline vapor: Toxics and VOC



Stage I **Stage II**

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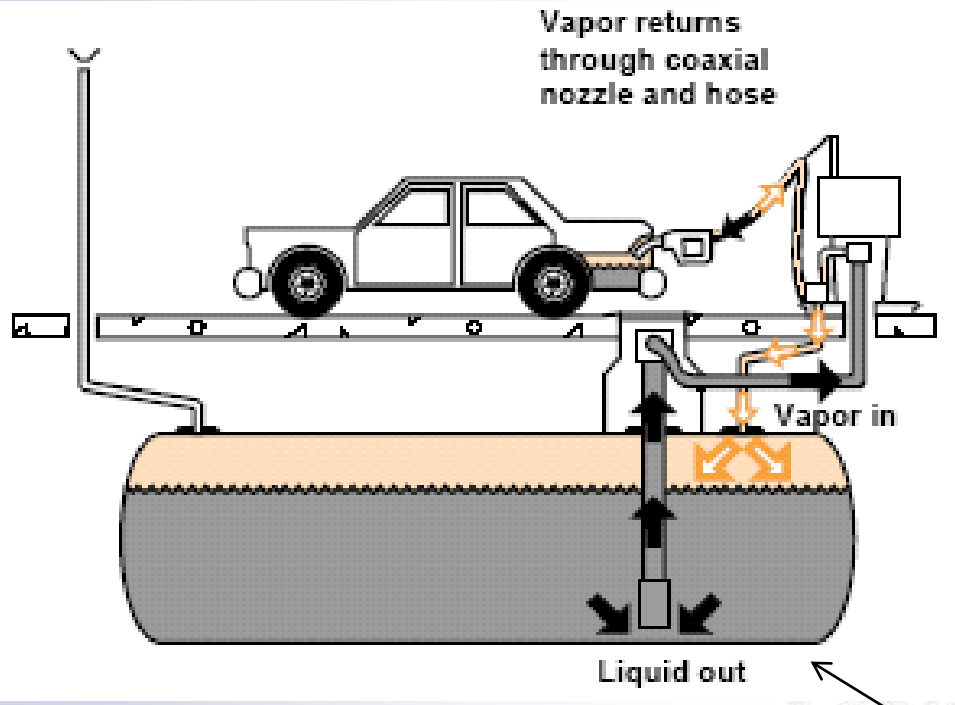
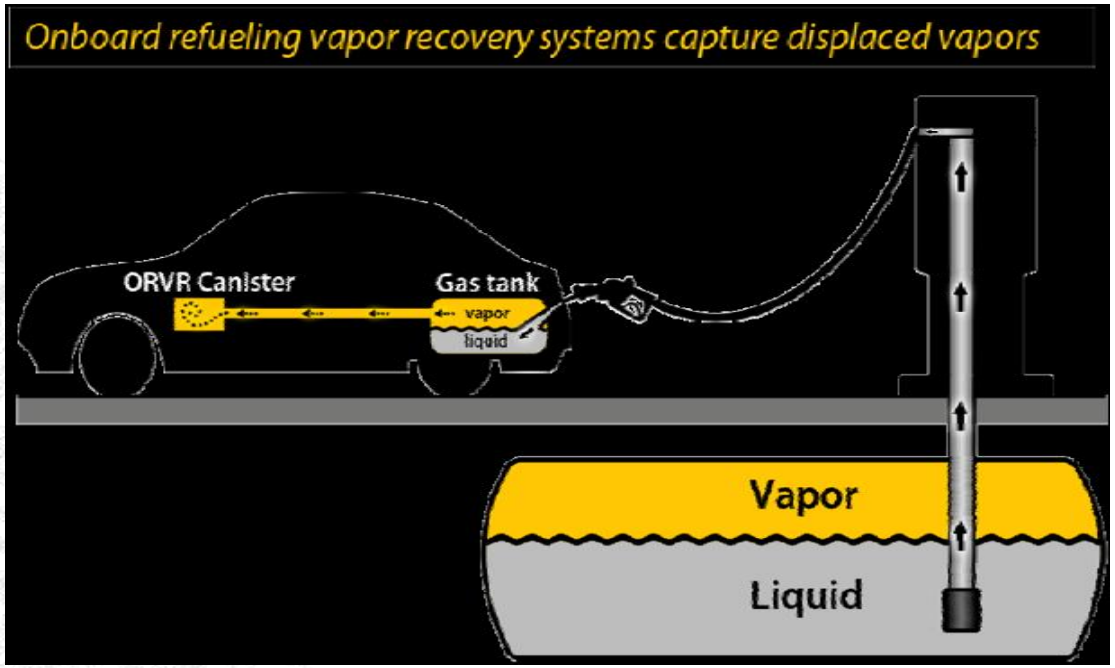
Control gasoline vapor emissions from vehicle tank:

Stage II System vs ORVR System





Gasoline underground storage tank (UST)

GDFs with Stage I/Stage II in DE and Vehicle ORVR system

- **Since 1993, GDFs in DE (with monthly throughputs >10,000 gal.) installed on-site:**
  - Regular Stage I systems
  - Vacuum-assist Stage II systems
- **In 1998, auto manufacturers started introducing vehicles with On-board Refueling Vapor Recovery (ORVR):**
  - As an additional control of vapor emission from the vehicle's tank during refueling

Incompatibility between Stage II and ORVR

- **Difference:**
  - ORVR system on-board of vehicle
  - Stage II system on-site at gas stations
- **ORVR system and vacuum-assist Stage II systems are "incompatible."**
- **As a result, excessive vapor is emitted from Underground Storage Tanks (USTs) due to vapor pressure increases in USTs.**

Solution to Incompatibility of Stage II and ORVR

- **Since 1998, more ORVR-equipped vehicles are on the road, and incompatibility vapor emission has become an a broader concern.**
- **In 2012, EPA issued a final rule and allowed removal of Stage II control in Ozone Transport Region (OTR) states, including Delaware.**
- **Meanwhile under Clean Air Act (CAA), a state:**
  - CAA Section 184(b)(2): Cannot increase VOC emission.
  - CAA Section 110(ℓ): Cannot contribute to violations of the 2015 ozone NAAQS.

2. DE 2015 Stage II rule revision for a trial period

- In September 2015, DAQ adopted the current version (the 2015 Stage II rule) to allow decommission of Stage II system;
- While removing Stage II requirement, DAQ incorporated new requirements (such as *enhanced* Stage I system and testing procedures) to ensure that gasoline storage tank's vapor system remains vapor-tight.

The 2015 Stage II rule: Requirements

- **Decommissioning of Stage II as an option;**
- **If a GDF chooses decommissioning, then it is required to:**
  - Install Stage I Enhanced Vapor Recovery (EVR) system, and either:
    (1) Install Continuous Pressure Monitoring (CPM) system, or
    (2) Implement monthly inspection and annual pressure decay test without pre-test fix.

Stage II decommissioning in process

- **Since 2015, 74 gas stations have decommissioned Stage II systems, in addition 30 stations are in decommissioning process.**

2017-2018 DAQ field observations

- **To evaluate effectiveness of the 2015 rule, DAQ staff conducted extensive field observations of testing on vapor tightness of gasoline storage tanks, including those**
  - At decommissioned sites, and
  - At Stage II sites.
- **During the field observations, DAQ received cooperation and input from station owners/operators, and testing contractors.**

3. Draft 2019 Section 36 revision

Considerations in the 2019 revision:

- Same goal as the 2015 version: Ensure storage tanks to be vapor tight.
- Removing Stage II systems:
  - To avoid excess vapor emission due to Stage II and vehicle-ORVR incompatibility.
- Upgrading regular Stage I system to EVR system:
  - To ensure better vapor emission control.
- Considering compliance schedule with Delaware's attainment date for the 2015 ozone standard.

Draft Section 36 revision

- **For new GDF:**
  - Prohibited for installation of Stage II system at construction.
  - Install Stage I EVR system at construction.
  - Install CPM system at construction, or
  - Comply with monthly inspection and annual pressure decay test.

Draft Section 36 revision (continued)

- **For existing GDFs:**
  - Decommission Stage II system by 12/31/2021.
  - Install Stage I EVR system by 12/31/2025.
  - Install CPM system when installing Stage I EVR, or
  - Perform monthly inspection and annual pressure decay test.

Draft Section 36 revision (continued)

- **For existing GDFs before 12/31/2021 (i.e., before decommissioning Stage II):**
  - Requirements in the 2015 version remain unchanged in the 2019 revision.

4. Draft 2019 Section 26 revision

Considerations in 2019 Section 26 revision:

- To establish connection with the 2019 Section 36 revision.
- Stage I systems in Section 26 will comply with the same EVR requirements specified in Section 36.

5. DE State Implementation Plan (SIP) revision for 2019 Sections 26 and 36 revision

- **In 2012, EPA issued a final rule to allow removal of Stage II requirement in Ozone Transport Region (OTR) states, including Delaware.**
- **CAA requirements for DE SIP when removing Stage II systems:**
  - CAA Section 184(b)(2): Cannot increase VOC emission.
  - CAA Section 110(*ℓ*): Cannot contribute to violations of the 2015 ozone NAAQS.

DE SIP analyses for 2019 revisions of Sections 26/36

- **Decommissioning Stage II by 12/31/2021 and installing Stage I EVR by 12/31/2025:**
  - Will avoid incompatibility VOC emission of 71 tons in 2021.
  - Will provide 58 tons of VOC emission reduction after 2025.
  - Total 129-ton long-term VOC emission reductions for attaining and maintaining the ozone air quality.
- **Removing Stage II systems in Delaware will meet the CAA requirements.**

6. Questions and Discussion

For more information:

https://dnrec.alpha.delaware.gov/air/permitting/under-development/

7. Next Steps

1. **Submit comments by 10/31/2019 to:**
   - Attention: Frank Gao
     Division of Air Quality
     100 W. Water Street, Suite 6A, Dover, DE 19904
   - Or email to: DNREC_1124_Regulations@Delaware.gov

2. **Publication of final proposal: December, 2019.**
3. **Public hearing: January, 2020.**
4. **Revision effective date: Spring, 2020.**