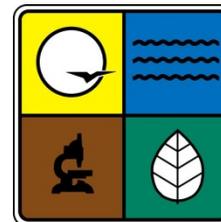


# Stage II and Widespread use in Missouri

---

Nicole Eby



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

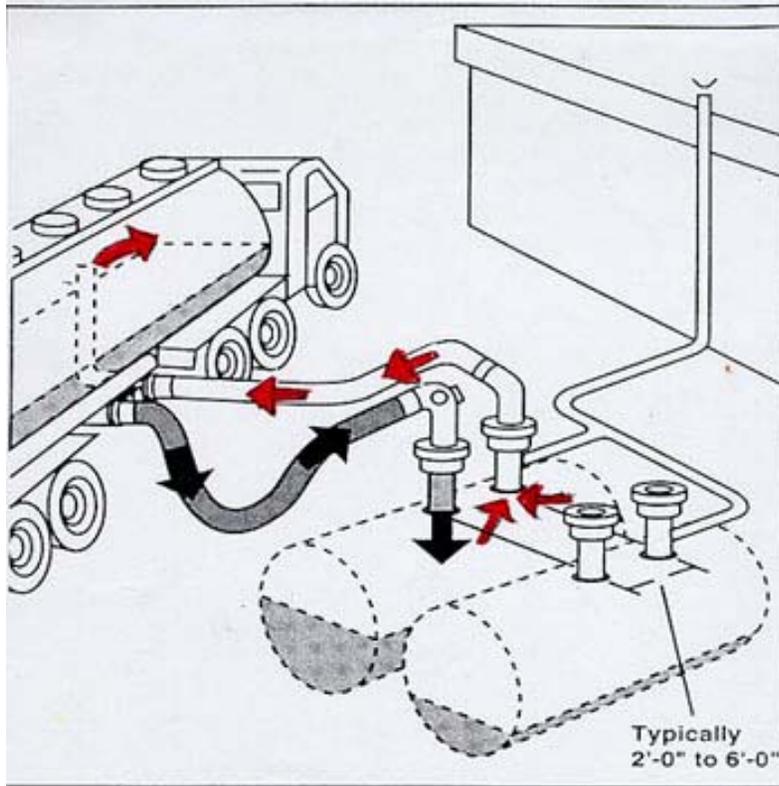
# Vapor Recovery Overview

- Vapor recovery system—A vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing the hydrocarbon vapors and gases so as to limit their emission to the atmosphere.
- Purpose in St. Louis area is to reduce VOC emissions that contribute to high ground level ozone

# ORVR

- Stands for Onboard Refueling Vapor Recovery
- A system on motor vehicles designed to recover hydrocarbon vapors that escape during refueling.

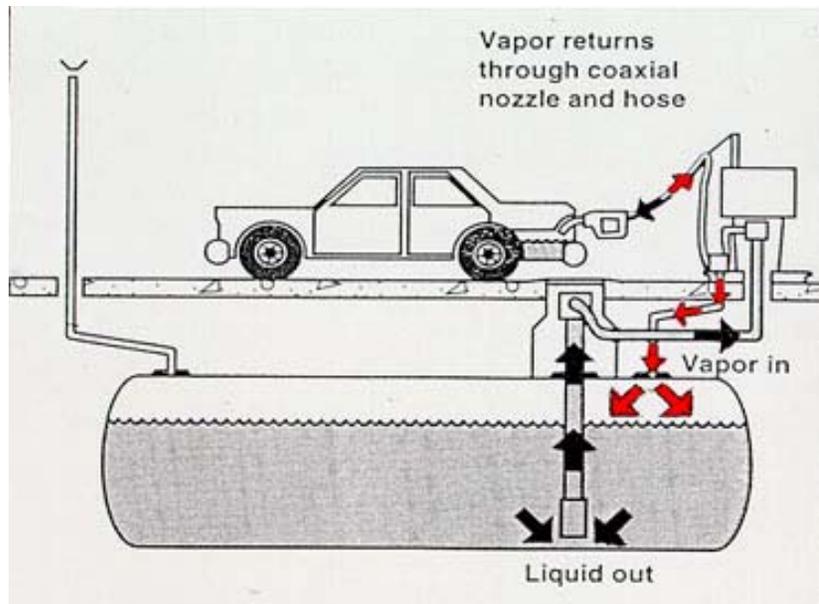
## Stage I



*Two-Point Stage I System*

Stage I vapor recovery system—A system used to capture the gasoline vapors that would otherwise be emitted when gasoline is transferred from a loading installation to a cargo tank or from a cargo tank to a storage tank.

## Stage II



Stage II vapor recovery system—A system used to capture the gasoline vapors that would otherwise be emitted when gasoline is dispensed from storage tank to the fuel tank of a motor vehicle.

# Stage II System Types

- Two types of Stage II Systems
  - Balance
  - Vacuum assist
- Vacuum assist
  - employs a vacuum inducing device, to collect and/or process vapors
  - Many are incompatible with ORVR so removal is a benefit
- Balance
  - uses direct displacement to collect and/or process vapors
  - compatible with ORVR and can still have benefits
- St. Louis uses only balance systems

# History- Stage II and ORVR

- Stage II Implemented in the 1980s as a control strategy for the St. Louis area to reduce VOC emissions that contribute to high ground level ozone
- EPA also required phase in of onboard refueling vapor recovery or ORVR in the motor vehicle fleet starting in mid 1990's. It also captures VOC emissions during refueling
- CAA allows EPA to revise or waive the Stage II requirement for ozone non-attainment areas after the Agency determines that ORVR is in widespread use throughout the motor vehicle fleet.

# How We Got Here

- May 2012 – EPA finalized the “Widespread Use Rule” stating that ORVR systems are in widespread use nationally as of the date of the rulemaking
- States may now choose to phase out Stage II equipment that captures vapor recovery at the gas pump
- In order to eliminate Stage II programs, states must demonstrate that the removal of the equipment will not affect air quality

## Normal Process

- **3-5 years before decommissioning start**
  - EPA finalizes a rule
  - State amends/revises state rule - 5.220
  - Rule goes through public comment/hearing process ~18 months
  - State submits rule revision and change to State Implementation Plan to EPA (plan allows Department to act as the authority of the Clean Air Act in the state)
  - EPA approves SIP ~1 – 3 year process

## Different Approach – Why?

- Would have faced situation where new stations would have to install equipment or existing stations would have to upgrade equipment for a rule that we knew would not exist in near future
- Common Sense
- May have caused confusion and unintentional non-compliance

## What We Are Doing/Have Done

- Worked closely with EPA to develop a draft plan and demonstration to show no negative impact
- Now that we have a draft plan
  - Established specific procedures for technical aspects of decommissioning
  - Allowing decommissioning to begin with written approval of the department
- New facilities started late in 2012. All facilities allowed as of March 15, 2013

## What We Are Doing (continued)

- Proceeding with ‘normal’ process concurrently with decommissioning process
  - Starting the process to remove Stage II requirement from state rules
  - Stage I still in place
  - Trying to address items in the rule beyond Stage II – from previous vapor recovery workgroup
- Keeping in mind that St. Louis is still an ozone nonattainment area

## **Rulemaking Will Address**

- Remove Stage II
- Replace MO/PETP with CARB certification/testing
- Retain restriction on ASTs > 1,000 gallons
- Require operating permits every 3 years and post construction
- Construction permit for Stage I modification
- Codify fees collected for permitting

# Rulemaking Will Not Affect

- Stage I 98% efficiency requirement
- Petroleum storage tank requirements
- Gasoline loading requirements

# Tentative Rulemaking Schedule

- Draft rule text/RIR 60-day comment period  
(try for 4<sup>th</sup> quarter this year)
- Public hearing  
(summer next year)
- Adoption  
(summer next year)
- Rule effective  
(tentative 4<sup>th</sup> quarter next year)

## More Information:

Vapor Recovery/Widespread Use

Web Page:

<http://www.dnr.mo.gov/env/apcp/vaporrecovery/epawidespreaduserule.htm>

- Click on the  Click to receive updates on this issue. to sign up for email updates

Missouri Department of

# Natural Resources

## **MDNR Air Pollution Control Program (573) 751-4817**

Kyra Moore [kyra.moore@dnr.mo.gov](mailto:kyra.moore@dnr.mo.gov)

Darcy Bybee [darcy.bybee@dnr.mo.gov](mailto:darcy.bybee@dnr.mo.gov)

Nicole Eby [nicole.eby@dnr.mo.gov](mailto:nicole.eby@dnr.mo.gov)

Wendy Vit [wendy.vit@dnr.mo.gov](mailto:wendy.vit@dnr.mo.gov)

Wayne Graf [wayne.graf@dnr.mo.gov](mailto:wayne.graf@dnr.mo.gov)

Stan Payne [stan.payne@dnr.mo.gov](mailto:stan.payne@dnr.mo.gov)

## **MDNR St. Louis Regional Office (314) 416-2960**

### **Vapor Recovery Unit**

## **St. Louis County Department of Health (314) 615-8953**

Ari Yarovinski [ayarovinskiy@stlouisco.com](mailto:ayarovinskiy@stlouisco.com)

Missouri Department of

**Natural Resources**

**Questions?**