



# Focus

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## Gasoline Vapor Recovery in Eastern Washington: Stage 1

Gasoline handling facilities are subject to several environmental regulations. The Department of Ecology's (Ecology's) Underground Storage Tank Unit of the Toxics Cleanup Program implements regulations intended to keep the contents of tanks out of the environment. Ecology's Air Quality Program has gasoline vapor recovery requirements to minimize air pollution from gasoline vapors. This focus sheet answers common questions about gasoline vapor recovery requirements at gas stations and bulk plants in the eastern Washington counties of Adams, Asotin, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Stevens, Walla Walla and Whitman. For gasoline vapor recovery requirements in counties not listed, contact your local air pollution control agency.

### **Background**

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Gasoline evaporates continuously until the surrounding air is saturated with vapors or until the gasoline is gone. Vapors accumulate within a storage tank in the space above the liquid gasoline. When a tank is refilled with gasoline, the rising liquid pushes accumulated vapors out into the air. Gasoline is transferred from tank to tank several times on its way to the consumer, and new evaporation happens during each transfer of gasoline. Emissions of vapor can be controlled at each transfer.

Gasoline vapors contain compounds such as benzene and volatile organic compounds. Benzene is known to cause cancer. Volatile organic compounds contribute to ozone pollution. If gasoline vapors can be captured, effects on human health and the environment can be minimized. In 1991, Washington State developed a rule (WAC 173-491) to control air pollution from gasoline vapors in order to protect public health and air quality. Since the rule's adoption, many gas stations and bulk plants have installed equipment that captures gasoline vapors.

### **Vapor Recovery Requirements**

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Vapor recovery equipment requirements are categorized as either Stage 1 or Stage 2. The information below should help you determine the requirements for your facility.

#### **Facilities requiring Stage 1 Vapor Recovery:**

- Any gasoline station that pumps more than 360,000 gallons of gasoline (excluding diesel) in a year.
- Any stations constructed after August 2, 1991 with a gasoline storage capacity greater than 10,000 gallons.
- Some stations modified after August 2, 1991 with a storage capacity exceeding 10,000 gallons of gasoline. (Contact Ecology's Air Quality Program for more information.)
- Any bulk plant with a total annual throughput greater than 7.2 million gallons of gasoline.
- Any bulk plant with retail activity as described above for gasoline stations.

## **Facilities requiring Stage 2 Vapor Recovery:**

- Some stations constructed or modified after August 2, 1991 with an annual gasoline throughput greater than 1.5 million gallons. (Contact Ecology's Air Quality Program for more information.)

### **Stage 1**

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Stage 1 is a name for the equipment that captures vapors coming from gasoline storage tanks while they are being filled. One piece of required equipment is a fitting that "vapor-balances" the tanks. The fitting attaches to a hose that returns vapors from the tanks being filled to the tank truck compartments being emptied. There are two kinds of Stage 1 equipment: dual-point and coaxial. To identify a coaxial system, look down your tank's fill point for what appears to be a tube within a tube, with a small gap between their walls. To identify a dual-point system, look for a second hatch (manway), usually within a few feet of the fill-point, which has a spring-loaded valve. The valve can be pushed open with a finger, and seals back up when released.

The other requirement is that the tank's drop tube have a submerged or bottom-fill line that ends near the tank bottom to minimize the splashing that increases fumes during delivery. To be in compliance with gasoline vapor recovery requirements, no part of the bottom of the tube should be more than six inches from the bottom of the tank.

### **Registration**

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Your underground storage tanks must be registered and permitted with Ecology's Underground Storage Tank Unit. You also need to register your station for gasoline vapor recovery with Ecology's Air Quality Program. Each station must be registered. If your station is not located within one of the counties listed at the beginning of this fact sheet, you must register for gasoline vapor recovery with your local air authority.

Vapor recovery registration includes:

- Annual reporting of gasoline throughput.
- Maintaining records of gasoline throughput for the most recent two years.
- Throughput records and verification of registration (provided by Ecology) must be available on-site for inspection.
- A \$100 annual registration fee per station and \$200 per bulk plant.

### **Additional information**

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The registration fee pays for sending and keeping records of stations, estimating how much gasoline vapor is emitted in order to help make decisions about air quality, inspections, and clerical and administrative work.

Ecology is authorized to inspect facilities and often does so. The Washington Clean Air Act (RCW 70.94.200) states that Ecology or a local authority shall have the power to enter, at reasonable times, public or private property (except private homes or duplexes) for the purposes of investigating the control, recovery, or release of contaminants into the air.

Ecology also offers technical assistance inspections to help you understand the rules that apply to your business about waste disposal and reduction, gasoline vapor recovery or underground storage tanks.

Both Ecology's Air Quality Program and Underground Storage Tank Unit must be notified prior to the modification or installation of tanks. Planned increases in tank capacity should be reported to Ecology's Air Quality Program because changes might require a Notice of Construction. The Underground Storage Tank Unit must be notified 30 days prior to tank removal or installation. The Air Quality Program should also be notified of any pump modification or installation.

Diesel isn't affected by gasoline vapor recovery rules because it evaporates slowly, and therefore emits pollutants at a lower rate than gasoline.

### **For more information**

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For more information on gasoline vapor recovery in eastern Washington, contact Ecology's Air Quality Program at:

Central Regional Office (509) 575-2490  
Yakima

Eastern Regional Office (509) 456-2926  
Spokane

For more information on underground storage tanks in eastern Washington, contact the Underground Storage Tank Unit at one of the numbers above.

This focus sheet is not a substitute for the full text of the gasoline vapor recovery rule, "Emission Standards and Control for Sources Emitting Gasoline Vapors" (Chapter 173-491 of the Washington Administrative Code). If you need a copy of the rule, call Ecology's Air Quality Program at one of the numbers listed above.

If you require this document in alternative format, please call Tami Dahlgren at (360) 407-6830 (voice) or (360) 407-6006 (TDD only).