Solvent users: Do you need an air permit?

BACKGROUND

Small businesses that use paints and solvents at their facilities may wonder whether their operations require an air operating permit. The answer: maybe not.

The Kansas Department of Health and Environment (KDHE) developed a regulation for facilities that purchase or use evaporative solvents such as cleaning solvents, inks, adhesives, or surface coatings. The regulation allows facilities that buy or use relatively small amounts of evaporative solvents to operate under the regulation without obtaining a permit. The following sections address some common questions regarding how small businesses can operate under the evaporative solvent regulation.

DO I NEED AN OPERATING PERMIT?

Facilities that buy or use materials such as paints and solvents that contain less than a total of nine tons of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), or both in any consecutive 12-month period do not need to apply for an air operating permit. Such facilities may simply track the amount of VOCs and HAPs they buy or use to demonstrate that their facility is indeed under the nine-ton-per-year limit.

A facility need not send notification on intent to operate under this regulation to KDHE unless it exceeds the nine-ton limit.

HOW MUCH DO I HAVE?

VOCs are common constituents of most organic industrial materials such as paints and solvents, and they are regulated because they combine to form harmful smog. HAPs are also found in materials like paints and solvnets, and they can get into the air we breath.

The material safety data sheet (MSDS) that accompanies the materials you buy or use lists the components of that material and often specifies whether it is a VOC or HAP. If the MSDS that accompanies your material does not specify VOC or HAP content, contact the vendor who supplied the material. You also may contact the Kansas Small Business Environmental Assistance Program (SBEAP) at 800-578-8898 for assistance in determining VOCs and HAPs in your materials.

Once you know the VOC and HAP content in your materials, calculating the amount in your entire quantity of the material is fairly simple. The back of this fact sheet shows how to calculate the amount of VOCs and HAPs for a business that uses paint.

WHAT IF I BUY OR USE MORE THAN NINE TONS OF VOCS OR HAPS?

If in any consecutive 12-month period you buy or use more than nine tons of VOCs, HAPs, or both, you must do *all* of the following:

- Within one working day after the discovery, notify KDHE in writing that you have bought or used more than nine tons of VOCs, HAPs, or both.
- Within 60 days after the discovery, submit a plan to KDHE describing how you will get back to using less than nine tons of VOCs, HAPs, or both in the future.
- Within 180 days after the discovery, apply for an appropriate operating permit.

If you purchase or use more than nine tons per year of VOCs, HAPs, or both; if you need additional information on other operating permits; or if you need assistance calculating the amount of VOCs or HAPs at your facility, call the SBEAP technical assistance hotline at Kansas State University at 800-578-8898, or e-mail SBEAP at SBEAP@ksu.edu.

HOW DO I CALCULATE MY VOCS AND HAPS?

The following sample calculation involving a paint product can be applied to VOC- and HAP-containing materials at your facility.

A facility purchased 300 gallons of paint in the last year (consecutive 12-month period), and you need to determine the amount of VOCs and HAPs purchased. The MSDS for the paint lists the density at 8.0 pounds per gallon and the components of the paint as follows:

VOCs:	59% (by weight)	VOC
Xylene:	8% (by weight)	HAP
Ethylbenzene:	2% (by weight)	HAP
Toluene:	26% (by weight)	HAP

To calculate the total amount of VOCs and HAPs that your facility bought:

1. *Determine and add the total percent of HAPs and VOCs in the paint.*

Since xylene, ethylbenzene, and toluene are HAPs, add up their weight percents. The total amount of HAPs is 36%. Because there is only one VOC listing, the total percentage of VOCs is simply 59%.

2. *Use the density of the paint listed on the MSDS to calculate the weight (tons) of paint.*

In this example, the density of the paint is 8.0 pounds per gallon. The amount of paint used is 300 gallons. Multiplying the two together, you find that 2400 pounds of paint were used. Knowing that one ton is 2000 pounds, that means you have used 1.2 tons of paint in the last year.

3. *Calculate the amount of VOCs and HAPs by multiplying the weight percent of each in the product by the total weight of the product and dividing by 100%.*

$$\text{Total VOCs} = \frac{(1.2 \text{ tons}) \times (59\%)}{(100\%)} = 0.71 \text{ tons}$$

$$\text{Total HAPs} = \frac{(1.2 \text{ tons}) \times (36\%)}{(100\%)} = 0.43 \text{ tons}$$

In this example, the record shows that only 0.71 tons of VOCs and 0.43 tons of HAPs were purchased in the last consecutive 12-month period. Therefore, this business may operate under the evaporative solvent regulation without obtaining a permit.

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The Small Business Environmental Assistance Program's (SBEAP) mission is to help Kansas small businesses comply with environmental regulations and identify pollution prevention opportunities. SBEAP is funded through a contract with the Kansas Department of Health and Environment. SBEAP services are free and confidential. For more information, call 800-578-8898, send an e-mail to SBEAP@ksu.edu, or visit our Web site at www.sbeap.org. Kansas State University is an EEO/AA provider.