

COMPLIANCE ASSISTANCE PROGRAM

SPOKANE REGIONAL CLEAN AIR AGENCY

UPDATE

An Informative Newsletter Helping Businesses Reduce Air Pollution in Spokane County

Summer Ozone Season...

Motorists and Gas Station Operators Can Help Reduce Ozone pollution

The U.S. Environmental Protection Agency recently revised the national, health-based standard for ground-level ozone. Ozone is a harmful air pollutant that is most prevalent during the summer.

Ground-level ozone is formed in Earth's lower atmosphere when pollutants, such as gasoline vapors and other volatile organic compounds (VOCs), react with nitrogen oxides in the presence of sunlight. Ozone can trigger a variety of health problems including chest pain, coughing, throat irritation and congestion. It can worsen existing lung diseases, such as asthma. Spokane County ozone levels are close to the new federal levels.

So, how can motorists and gas station operators help reduce ozone? Aside from driving less, motorists can do a couple of things:

- ❖ **Don't overfill the tank.** Stop at the first "click" to reduce loss caused by evaporation and spills.
- ❖ **Replace your gas cap tightly.** Make sure your gas cap is properly-fitted, if not, replace it. Secure the cap on tightly after refueling.

Gas stations can have a big impact too, since they account for 40% of the stationary sources of VOC emissions in Spokane County. To reduce VOC emissions, it's important (and required) for gas stations owners/

operators to keep equipment well-maintained. To ensure this, stations are inspected annually. Common "problem areas" include loose caps, cracked gaskets, and gasoline in the spill bucket.

Spokane Clean Air recommends weekly self-inspections of:

Fill Adaptor: It should be tight.

Fill Cap: It should be in place, sealed and in good condition.

Fill Cap Gasket: It should be present and in good condition.

Fill Tube: The submerged fill tube should be present and in good condition.

Fill Cap/Vapor Cap: The cap should match the Spokane Clean Air Notice of Construction approval requirements (if applicable) and the Spokane Clean Air registration information.

Spring-loaded fill tube: It should seal against the coaxial fitting and the gasket should be in good condition (for coaxial State I systems) and the tube should operate properly (doesn't jam) and all springs intact.

Vapor Adapter: It should be tight and not move when jiggled (for Dual Point Stage I systems.)

Poppet Valve: It should operate properly; gasket should be in place and in good condition (for Dual Point Stage I systems.)



Spill Clean-up supplies: Adequate spill cleanup supplies should be on-hand, and spills cleaned up upon discovery.

Records: A variety of records should be kept and available on-site for review upon request:

- ✓ Current MSDS sheets;
- ✓ A copy of the approved NOC;
- ✓ Total annual gas throughput for the current year and two previous years;
- ✓ Maintenance records for the previous 24 months of operation, including dates, nature of maintenance, and all certification tests performed.

To assist station owners/operators, a variety of print materials is available as well as free pollution prevention consultations. For details, call Margee Chambers at 477-4727, ext. # 114.

Inside . . .

Regulation & Program Update	2
Beyond Compliance, 2nd in a series	3
Recognition Program Expanding	4
Spotlight: Haakon Industries	5

Regulation & Program Update

Federal Rules for Dry Cleaners Using Perchloroethylene (PERC)



Existing dry cleaners installed on or after December 9, 1991 and before December 21, 2005, must be in compliance with new federal standards (40 CFR Part 63, Subpart M) by July 28, 2008.

Key new requirements include:

✓ Pressure Monitoring:

If a dry cleaning machine is equipped with a pressure gauge on the refrigeration system, the operator must monitor and record the high and low pressure during the drying phase once per week. Please consult machine operation manual for ideal parameters for the pressure readings. This is ONLY for machines that have a pressure gauge on the refrigerated condenser unit. If your machine DOES NOT have a pressure gauge, then this record keeping requirement doesn't apply to you.

✓ Monthly Leak Inspections:

Monthly inspections for vapor leaks using a halogenated hydrocarbon detector or PERC gas analyzer (such as a photo ionization detector or 'PID') are required while the machine is operating. This monthly inspection will satisfy one of the weekly inspections (by sight, smell, touch) for perceptible leaks.

A halogenated hydrocarbon detector is a portable device capable of detecting vapor concentrations of PERC of 25 parts per million by volume (ppmv) and indicating a concentration of 25 ppmv or greater by emitting an audible or visual signal that varies as the concentration changes.

✓ Notice of Compliance Status:

Each owner or operator of a dry cleaning facility is required to **submit a notification of compliance status to Spokane Clean Air before July 28, 2008**. The forms were mailed to all dry cleaners in February. For a copy of the form, visit www.spokanecleanair.org/epa_new_perc_dry_cleaner_rule.asp.

View Entire Rule at:

www.spokanecleanair.org/epa_new_perc_dry_cleaner_rule.asp.

Existing State Rules for Dry Cleaners Using Perchloroethylene (PERC) -

Along with the new federal rules, dry cleaners are reminded of an existing state rule: WAC 173-400-075 (8)(F) which requires that dry cleaners using PERC solvent and refrigerated condensers (RC), **must have the temperature sensor for the RC labeled "RC Inlet" and "RC Outlet."**

As technology improves, new solvents and garment cleaning processes are being developed that have less environmental impact than PERC.

Benefits of PERC alternatives may include reduced paperwork, reduced regulations, reduced emissions, and potential savings in hazardous waste disposal costs.

For more information, and for a free Pollution Prevention consultation, contact:

Margee Chambers,
Pollution Prevention Specialist,
(509) 477-4727, extension # 114
mchambers@spokanecleanair.org.

Other Regulation Updates:

New Fee Schedules Adopted:

On July 1, 2008, new fees take effect for the Annual Registration Program and the Notice of Construction permit program. The Spokane Regional Clean Air Agency's Board of Directors approved the revised fee schedules to move the agency closer to operating at full cost-recovery for these programs. The Board will periodically review the fees and adjust as necessary to achieve and maintain full cost recovery for the programs. Questions about your facility fees may be directed to Joe Southwell, 477-4727, ext. # 103.

Air Operating Permit Fee Revisions:

Spokane Clean Air has proposed revisions to its Regulation I, Article X, Section 10.06 – Registration and Operating Permit Fees For Air Contaminant Sources and Regulation I, Article X, Section 10.07 – Application and Permit Fees for Notice of Construction and Application for Approval and for Notice of Intent to Install and Operate a Temporary Stationary Sources.

The purpose of the revisions is to achieve full cost recovery of the Air Operating Permit (AOP) Program, as mandated by Federal and State Clean Air Acts. The proposed revisions are available at www.spokanecleanair.org or for a hard copy, call April at 477-4727, ext. # 105.

A public comment period is underway to be followed by a public hearing on July 3, 2008, 9 a.m., in the lower level of the Public Works Building, 1026 W. Broadway Ave.

Beyond Compliance: Surface Coating

Editor's Note: This is the second article in a series featuring ideas for businesses to go "beyond compliance."

Calculating True Costs of Paints/Coatings

If you simply look at price per gallon, alternative coatings often seem more expensive. Price per gallon, however, does not tell the whole story. You can only determine true costs by calculating how much the coating costs per unit of painted product. Once this calculation is completed, you can make a more informed decision on whether to purchase a substitute coating product.

Step 1: Figure Cost of Paint Solids:

Conventional solvent-based liquid paints include both volatile and solid components. When paint is applied, the volatile components evaporate and solids are left behind on the product's surface. The cost of that solid fraction is what needs to be figured in to accurately compare costs of coating products. The cost of the solid fraction can be calculated from information provided in the product's Material Safety Data Sheet (MSDS) or Product Data Sheet (PDS), which are available from the manufacturers. The paint's total

per-gallon cost is divided by the solids percentage to obtain the cost per gallon of solids. **Example:** If a paint product costs \$15 per gallon and contains 33% solids, then you would divide 15 by 0.33. So, $15 / 0.33 = \$45.45$, the cost per gallon of paint solids.

Step 2: Figure Ideal Paint Cost per Square Foot:

If a desired thickness is known, this cost can be further refined into a cost per unit of painted surface area using the following formula: (Cost of paint solids per gallon) X (film thickness in millimeters) X (0.0006233) **Example:** (\$45.45 per gallon of paint solids) X (2 mils finished film thickness) X (0.0006233 conversion factor) = 5.7 cents per square foot, assuming an ideal 100% transfer efficiency.

Step 3: Figure Actual Paint Cost per Square Foot:

A 100% transfer efficiency is almost never achieved when applying liquid coatings with spray equipment. To calculate a more accurate cost of using a liquid coating, the transfer efficiency of the application equipment and paint product must be considered. In most spray painting operations, only a portion of the product that is sprayed actually reaches the surface to be coated. The remainder,

(overspray) is collected in the paint booth exhaust filter or settled to the floor of the paint area. The amount of paint reaching the product versus the total amount of paint sprayed is referred to as the transfer efficiency. To calculate actual costs of paint per sq. foot of applied finish, the estimated transfer efficiency must be factored into the cost formula: Ideal (100% transfer efficiency) paint cost per sq. foot + actual transfer efficiency percentage = actual paint cost per sq. foot. **Example:** A paint operation has an estimated transfer efficiency of 50%. Take the 5.7 cent calculated for 100% transfer efficiency and divide by 0.50 to determine actual coating cost. (5.7 cents per square foot) / (0.50 transfer efficiency) = 11.4 cents per sq foot.

Step 4: Figure Total Cost of Painting:

Now that a cost estimate per sq. foot has been determined, you can apply this figure to an estimated cost per painted part. **Example:** A flat panel part has an area of 10 square feet. Multiply your cost per square foot times the square footage of the part. (11.4 cents per square foot) X (10 square feet) = \$1.14 per part. (Note: For parts that are oddly configured, estimate square footage.) *Calculations: P2 Resource Council: www.pprc.org/pubs/factsheet/coatcost.html*

Success Stories

Switch Coatings: A manufacturer of commercial displays found a water-based coating that could replace its solvent-based coating for painting metal parts. The facility eliminated nearly all VOC emissions from the coating process, and acetone emissions from the cleaning process. And nearly all hazardous waste generation and disposal was eliminated - about 110 gallons per month - resulting in a savings of \$12,000 per year.

Switch Equipment: An auto body shop switched from applying

solvent-based coatings with conventional air atomized spray guns to high volume low pressure (HVLV) guns with gravity-fed paint cups. The transfer efficiency increased from 25-30% to 40-70%. After an initial capital investment of \$2,175 for the new guns, there has been a 25% decrease in the amount of coatings used. This represents a 25% reduction in VOC emissions and an overall cost savings of \$60,000 per year.

Switch Solvents: An auto body shop switched from using MEK or lacquer thinner to a low-VOC solvent

to clean their spray guns. They also used a recirculating gun washer to capture evaporative losses. This change eliminated 660 gallons of MEK used for a cost savings of \$9,600. VOC emissions have decreased from 480 grams/day to 0.64 grams per day, a 96% reduction. By not using MEK—a hazardous air pollutant that has a strong odor, employees and neighbors can breathe a little easier.

Stories provided by Oregon DEQ. For more information and/or to set-up a free pollution prevention consultation, call Margee Chambers, 477-4727 x 114.

Recognition Program Expanding



Ten years ago, we launched a program to recognize businesses for their efforts to reduce air emissions.

“Doing our share for clean air” recognizes businesses that meet three basic criteria, outlined below under Level 1.

We are expanding the program to two levels in order to recognize businesses that are going beyond meeting the minimum criteria. Both levels are as follows:

Level 1 – SILVER

Criteria for natural minor sources:

▲ Has not been issued a Notice of Violations (NOV) from our Agency during the past three years.

▲ Annual registration form is complete and submitted to us by the required due date.

▲ Annual registration fees are paid by required due date.

Criteria for Air Operating Permit and Synthetic Minor sources:

▲ Has not been issued a NOV from Spokane Clean Air during the past three years.

▲ Annual emissions inventory complete and submitted by required due date.

▲ All required reports submitted by required due date(s).

If the applicant meets these criteria, they will receive a window decal, a listing in the Update newsletter, and a listing on our Agency’s website.

Level 2 – GOLD

Criteria for all sources:

▲ Must qualify for level one.

▲ Implement 3 of 5 pollution prevention practices listed below:

- ✓ Energy efficient lighting, heating/cooling, water heating, equipment, combustion efficiency.
- ✓ Process changes, source reduction, material substitution
- ✓ Sector specific: drycleaners, surface coaters, gas stations, boilers/kilns, printers, back up generators
- ✓ Transportation – commute trip reduction, no idle policies, cleaner fleet vehicles
- ✓ Participates in the Agency’s free Pollution Prevention consultation.

Level 2 recognition includes Level 1 items, plus a certificate presented by the Spokane Clean Air Board of Directors and a print advertisement in a local newspaper.

A mailer describing the program in more detail, and an application form, will be sent to all registered sources with their next Annual Registration Form.

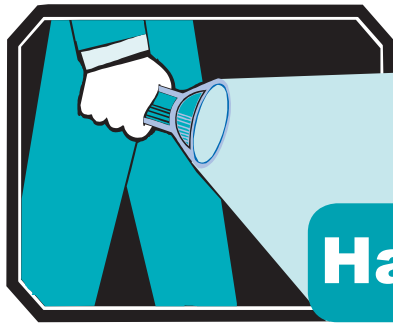
Please contact Margee Chambers, Pollution Prevention Specialist, if you would like further information: 477-4727, extension # 114. ■

What You Can Do For Our Air

Since most air pollution comes from our everyday activities, there are a number of choices you can make for clean air. Every little bit we do to reduce emissions helps our air quality. Here are some suggestions:

- **Drive Less** — Leaving the car at home, even just once a week, can make a huge impact: automobiles are still the largest contributor to air pollution. Skip a trip by combining errands, sharing rides with family/friends, taking a bus, riding a bicycle, or walking.
- **Drive Smart** — Better gas mileage means fewer trips to the gas station, which means less air pollution. Improve your mileage by driving the speed limit, avoiding jackrabbit starts and stops, keeping your car well-maintained and your tires properly inflated.
- **Use Less Energy** — When replacing light bulbs, select Compact Fluorescent Lights (CFLs). Look for Energy Star lighting, which provides bright, warm light, uses at least 2/3 the energy than standard lighting, generates 70 percent less heat, and lasts up to 10 times longer.
- **Make the Switch** — When feasible, switch from gas-powered lawn/garden equipment for electric or manual powered tools. Not only are they cleaner and quieter, but they require little maintenance compared to their gas counterparts.
- **Upgrade your Heat** — If you have an older wood stove or fireplace insert (pre-1988) a lot of your heat may be going up the chimney as smoke. Not only are these devices dirtier, they don’t burn as efficiently, using as much as 2/3 more wood to heat the same area than a newer device.

For more tips visit us online at: www.spokanecleanair.org.



Business Spotlight

Haakon Industries—Cheney

Haakon Industries-Cheney designs and manufactures custom Heating, Ventilation, and Air Conditioning (HVAC) systems for buildings throughout North America. Manufacturing custom HVAC systems is complex due to the wide range of system types and sizes needed in order to meet the unique needs of each client. Within this complex industry sector, and while growing their business, Haakon Industries has been able to implement a variety of pollution prevention practices. The results have improved the company's bottom line, reduced their impact on the environment, and created a healthier workplace for their employees.

From 1995-2005, Haakon's operations increased and they were approaching a self-imposed facility emissions cap for Hazardous Air Pollutants (HAPs.) The cap is an option for facilities who want to stay below the threshold for the federal Title V Air Operating Permit (AOP) Program. Facilities that are subject to the AOP program pay higher fees and have more rigorous regulatory oversight and enforcement policies than other registered facilities.

Although Haakon was planning to convert a large portion of their solvent-based paint products to water-based, they needed time to test the new coatings and go through the conversion process. In early 2006, they requested an increase in their emission limits and became subject to the AOP program while they worked to switch their coatings.



By the end of 2006, Haakon's conversion from solvent to water-based paints was complete and their emissions were below the AOP limits. In fact, their emissions dropped below the previous cap they had for HAPs so they are no longer subject to any facility-wide HAPs emission limits. This resulted in fewer permit requirements and lower annual registration fees.

"We went from 100% solvent-based paints to 85% water-based," according to Bryan Dearden, General Manager of Haakon Industries in Cheney. "We'd like to go to 100% water based paints, but due to the customization of orders, some require specific coatings, that are not water based," added Dearden.

"Using water-based paint is more expensive, but employees are no longer breathing in the harmful vapors from solvent-based paint. The switch reduced the air quality permit requirements, lowered our fees and our environmental impact on the community," said Dearden.

In addition to switching out coatings, Haakon uses a still to recycle and reuse the solvents used for prep and clean up and a water evaporator system to reduce water-based paint waste created from clean up. They have the largest spray paint booth in the area to control overspray and reduce impacts from the painting emissions. They've also modified their boiler which reduced emissions enough to drop it below Spokane Clean Air registration limits for boilers.

Spokane Clean Air commends Haakon Industries-Cheney for the outstanding efforts they've put forth to reduce their air emissions and improve air quality for their employees and for our community. ■

UPDATE is published by the Spokane Regional Clean Air Agency (Spokane Clean Air) as part of its Compliance Assistance Program. Comments, suggestions and article ideas may be directed to Update Editor Lisa Woodard.



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Air . Quality . Calendar

- Jul. 3 Board of Directors meeting. 9 a.m., lower level hearing room, Spokane County Public Works Bldg, 1026 W. Broadway Ave. Meeting agendas are available at www.spokanecleanair.org.
- Aug. 7 Board meeting, see time/location details above.
- Sept. 4 Board meeting, see time/location details above.

Spokane Regional Clean Air Agency 2008 Board of Directors:

Jeff Corkill, City of Spokane Representative, Chair
Rose Dempsey, City of Spokane Valley
Edward "Chuck" Crockett, Small Cities & Towns Representative
Melissa Ahern, Member-at-Large
Bonnie Mager, Spokane County Commissioner

*Preserve, enhance and protect the quality of Spokane County's
air resources for the benefit of current and future generations.*

Spokane Regional Clean Air Agency mission

This newsletter is available electronically at Spokane Clean Air's website. To add or remove names to **UPDATE** mailing list, call 477-4727.

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