HAZARDOUS WASTE

WASHINGTON STATE DEPARTMENT OF ECOLOGY

# Shoptalk

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*A quarterly publication for hazardous waste generators*

# Environmental Management Systems

Late at night, as you go over the day's business, have you ever wondered just where pollution prevention fits within the big picture? Pollution prevention can stand alone as a management tool to control environmental costs and ensure compliance with environmental regulations. But becoming acquainted with its close relative - the environmental management system - will really help you put pollution prevention into action.

An environmental management system spells out a set of procedures designed to establish and implement environmental policies. This system ensures that a facility says what it does and does what it says.

Environmental management systems differ from conventional pollution prevention plans in that the environmental management system is not a one-time set of instructions. Rather, it continually changes and improves.

To achieve their goals, environmental management systems rely on continual **checking** to see that procedures are followed, **measuring** to see if the goals are met, **reporting** to management and the public, and **evaluating** to see if goals are still appropriate.

By looking at the entire production process, pollution prevention can help a facility achieve regulatory compliance at less cost than end of the pipe treatment. An environmental management system shifts responsibility for pollution prevention to all employees by making it a part of every management decision.

Some major corporations have found that environmental management systems create impressive economic benefits. 3M Company attributes one billion dollars in benefits to its environmental management system that began in 1975. Environmental management systems for smaller facilities don't need to be complex and can bring similar benefits from continual improvement.

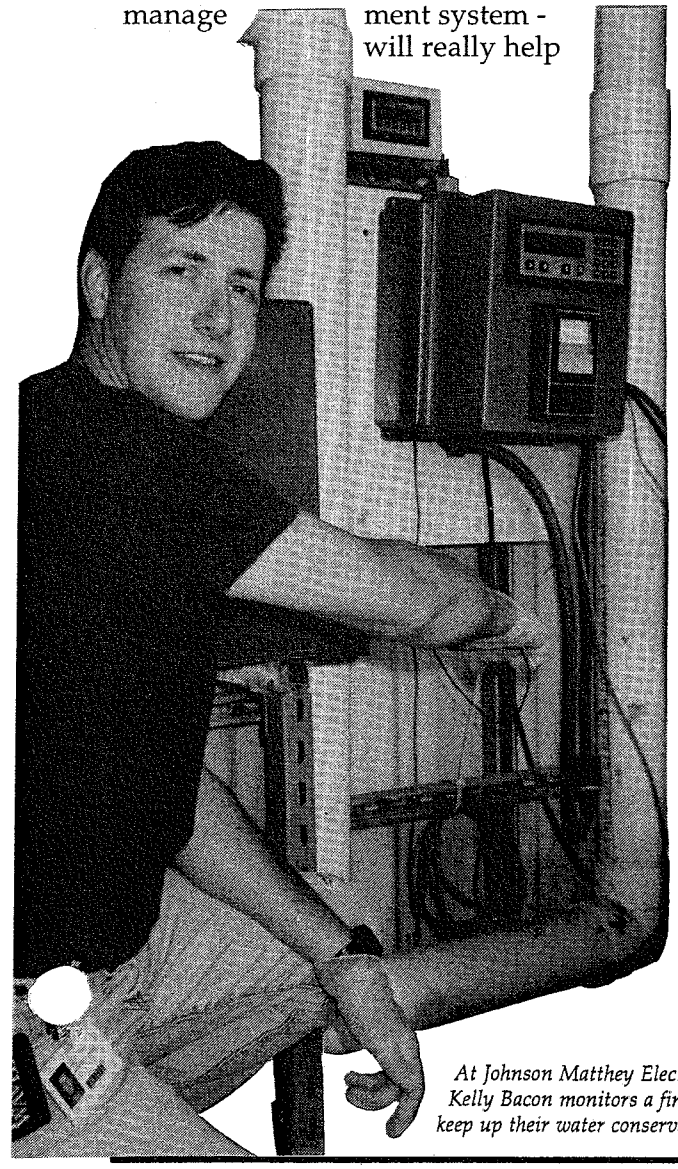
Environmental management systems must be flexible to be effective. The most well known environmental management system standard is the 14000 series of the International Organization for Standardization, or ISO 14000. These standards are voluntary and non-governmental, yet they are exerting increasing influence on a wide range of businesses.

Businesses that become certified to an environmental management system standard can:

- ✔improve access to some markets,
- ✔meet the requirements of buyers,
- ✔assure insurance companies and banks that procedures are in place to maintain compliance with environmental regulations and to reduce environmental costs and future liabilities.

Facilities that adopt an environmental management systems approach may also satisfy Washington's pollution prevention planning requirements.

For more information , contact Jerry Parker at (360) 407-6750.



*At Johnson Matthey Electronics, Kelly Bacon monitors a final flow meter to keep up their water conservation standards.*

**Inside:**

## School Sweeps Campaign to Affect the 21st Century

Students certified by vocational programs in Washington's community and technical colleges will soon bring a new skill into the workplace - environmental management.

By following the same skills-based system already used by community colleges, Ecology staff working on the School Sweeps project drafted environmental competencies to make sure that students understand safe and effective ways to handle hazardous waste generated on the job.

Instructors teaching in the areas of automotive repair, auto body repair, dental, photography, and woodworking/carpentry can now incorporate techniques for safe waste management into their current teaching plans.

The next generation of skilled workers will leave school understanding that if the work they do generates wastes, then they have the responsibility and skill to properly handle them.

As part of School Sweeps, Ecology staff and representatives from the Local Hazardous Waste Management Program in King County provided technical assistance visits to every state community and technical college. These visits focused on bringing the entire campus into compliance with environmental regulations and introduced ideas to help reduce sources of pollution.

Through this program, students can put their training to immediate use while helping their school become a model of environmental compliance and pollution prevention.

For more information on the School Sweeps project, please call Patricia Jatczak at (360) 407-6741.

## Free Help to Electroplaters and Fiberglassers

Ecology is offering **free**, non-enforcement visits to businesses involved in electroplating metal parts or the use of fiberglass reinforced plastics. Around 100 electroplaters and 180 fiberglassers received letters this fall offering an on-site consultation with one of Ecology's Toxics Reduction Specialists.

This effort is a follow up to a focused pollution prevention study of these industry sectors. The project created a condensed summary of pollution prevention opportunities for fiberglassers, electroplaters, and printed circuit board manufacturers.

To date, 24 electroplaters and 15 fiberglassers have requested on-site visits by Toxics Reduction Specialists, and have benefited from the expertise gained by Ecology's work with these industries.

To arrange a technical assistance visit to your business, call an Ecology regional office at the phone numbers printed below and ask to speak to a Toxics Reduction Specialist.

If you would like to know more about the pollution prevention studies done on these industry sectors, call Miles Kuntz at (360) 407-6748.

## Software Tools for Energy Efficiency

Now you can use technology to meet the energy needs of your business. These software packages are available from the Washington State University Cooperative Extension Energy Program. Call 1-800-373-2139.

✔ENACT - Tracks how much energy, water, sewer and garbage service your facility uses, and the cost of each. Used by many Washington businesses. Managers can see where energy and resource conservation can save money. Cost: $395^{00}$ new users, or $150^{00}$ to upgrade.

✔BALLASTMASTER - New on the market. Provides an electronic catalog of lighting ballasts, plus the software to show which products meet the criteria for a particular application. Users can compare the expense of different ballasts based on the operating costs of each. Cost: $200^{00}$

✔MOTORMASTER - New Windows version. Users list electric motors built for a particular task, then compare the cost of an energy-efficient motor to a standard motor. Yearly updates give you accurate prices and product information. Call 1-800-862-2086 to learn about this FREE software.

## Need help? Who can you call?

Ecology's regional office staff can answer your questions.

*Central Regional Office*
*(509) 575-2490*
Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan and Yakima

*Eastern Regional Office*
*(509) 456-2926*
Asotin, Garfield, Columbia, Walla Walla, Grant, Adams, Whitman, Spokane, Lincoln, Ferry, Franklin, Stevens, and Pend Oreille

*Northwest Regional Office*
*(206) 649-7000*
Whatcom, Skagit, San Juan, King, Kitsap, Snohomish, and Island

*Southwest Regional Office*
*(360) 407-6300*
Skamania, Clark, Cowlitz, Wahkiakum, Pacific, Lewis, Pierce, Thurston, Mason, Grays Harbor, Jefferson, and Clallam

## *Case Study:*
## Johnson Matthey Electronics - Spokane

Spokane-based Johnson Matthey Electronics is an innovator in rare metals fabrication and electronics manufacturing. The company won the 1996 Governor's Award for Continuing Excellence in Pollution Prevention. Johnson Matthey continued its commitment to look for new pollution prevention opportunities after receiving a Governor's award in 1993.

According to environmental manager, Jim Wilson, "Every process utilizing hazardous substances or generating hazardous waste was thoroughly reviewed." The company reduced hazardous waste disposal costs by $170,000 per year by following their pollution prevention plan. Through 1995, the company had achieved a 62 percent reduction in hazardous substance use.

Johnson Matthey attributes much of its success to the many individuals working at different levels throughout the organization. This cooperative approach helped to develop the innovative pollution prevention methods now used at the facility.

The facility was generating acetone contaminated water, which it disposed of as hazardous waste. Ecology staff found a local company that could use this waste stream as a raw material, turning the waste into a product.

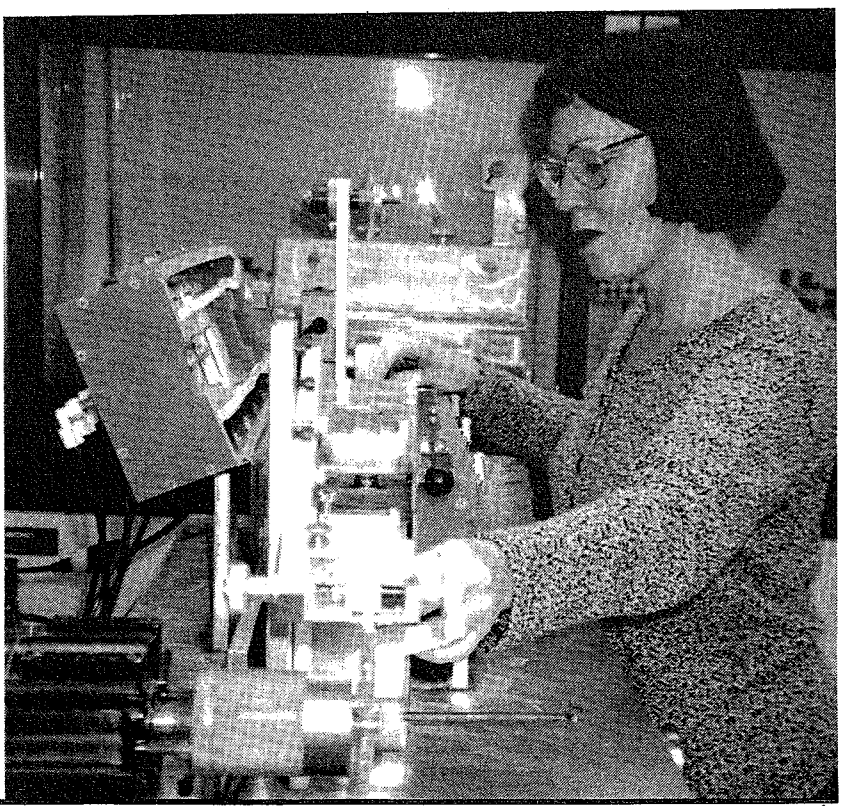
Installing flow meters was the key to a successful water conservation effort. The meters measured where waste water was generated so it could be reduced. Johnson Matthey's water consumption dropped by 14,000 gallons a day between 1993 and 1996, even though production increased by 40 percent.

Johnson Matthey staff and their consultants have shared pollution prevention ideas with the City of Spokane, the Northwest Pollution Prevention Exposition and the Department of Ecology. The company also supports the Spokane Intercollegiate Research and Technology Institute on-site intern program through a project to remove cadmium from waste water.

The company is pursuing ISO 14000 certification (see lead story). Once certified, Johnson Matthey can be even more competitive in its market, as well as continue its commitment to protecting the environment.

Call a Toxics Reduction Specialist at the regional office nearest you to obtain more information on waste reduction opportunities for your facility, or to learn more about Ecology's pollution prevention awards program.

*Karla Babb washes gold ribbon with a specially designed machine. The ribbon is washed with soap and water, where once freon and trichloroethane were used*



## Bookshelf

**New Guides for Parts Cleaning and Solvent Substitution**

Ecology now offers seven new publications that will help businesses switch to less toxic solvents and parts cleaning systems. These guides provide information on reducing parts cleaning wastes, evaluating solvent substitutes and cleaning alternatives.

The new titles include:

- ✔#96-420, *Solvent Substitution Options*
- ✔#96-421, *Waste Reduction for Small Parts Washers*
- ✔#96-422, *Frequently Asked Questions Concerning Solvent and Cleaner Disposal*
- ✔#96-423, *Optimizing your Parts Cleaning System*
- ✔#96-424, *Evaluation of Solvent Substitutes*
- ✔#96-425, *Switching to Aqueous Parts Cleaning*
- ✔#96-428, *Solvent Substitution: Where to Find Information*

Call (360) 407-7472 to obtain your FREE copies.

## Questions and Answers

The Fall issue of *Shoptalk* featured this question, *" I know some shops drain gas filters into the containers they use to collect used oil. Is this okay? Does draining the gas filters into the used oil make it a hazardous waste? Would a gallon or two of gas make a tank of waste oil flammable?"*

Apparently, our response created more questions than it answered. Following the guidelines below will keep you safe and also in compliance with the *Regulations*.

- ✔ Ecology does recognize that through normal shop practices, ***small*** amounts of gas may get into used oil. This might happen when fixing a leaking fuel line or changing a fuel filter. This should not cause a problem.
- ✔ Intentionally mixing anything with used oil may jeopardize your ability to manage the mixture as used oil. By mixing, it may become a hazardous waste which could cost extra time and money to manage properly. Mixing can also cause fire code problems and fire safety concerns.
- ✔ Businesses planning to mix fuel products, like gasoline, with used oil to burn the mixture for energy recovery need to meet strict regulatory requirements. Contact your local Ecology regional office before mixing anything with used oil.

**Q** How do I find out more about environmental management systems?

**A** Magazines and trade journals feature stories on environmental management systems, but you will find the most information on the Internet.

Hit **http://www.seattle.battelle.org/p2online/shweb.htm** for an article reporting information taken from corporate Environmental Annual Reports published on the Internet.

The information includes design checklists, Toxics Release Inventory statistics, pollution prevention case studies, and environmental management system software you can download. The end of the article links you to a short directory of related web sites.

Get information on the ISO 14000 standard for environmental management systems from the non-profit International Standards Initiative, attn. K.C. Ayers at 206-392-7610 or at **kcayers@isi-standards.org.**

### Ecology Contacts

Remember, your business is liable for all hazardous wastes generated. If you are uncertain about your responsibilities as a hazardous waste generator, call your nearest Ecology office and ask for a hazardous waste specialist. For information on reducing or recycling hazardous waste, ask for the toxics reduction staff, also at the following numbers:

*Bellevue:* (206) 649-7000
*Lacey:* (360) 407-6300
*Yakima:* (509) 575-2490
*Spokane:* (509) 456-2926



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