



Shop Talk

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 publication for
 hazardous waste
 generators

Inventory Control Can Help Reduce Waste

Inventory control allows a company to track and control the types and quantities of raw materials it purchases, stores, distributes and consumes. Good inventory control practices reduce costs from handling and disposing of raw materials. It also ensures that material is available when needed.

Problems from Improper Inventory Control

Without proper inventory control, unneeded and obsolete materials tend to accumulate. Holding these surplus materials at your facility can

create the following problems:

- ✓ Increased need and cost for storage or floor space.
- ✓ Increased costs for disposing of materials that have expired, are out-of-specification, or are no longer needed for production.
- ✓ Increased risk of spills caused by excess handling and age of packaging.

Techniques for Improved Control

- ✓ Practice Just-in-Time manufacturing:
 - Purchase only the amount of raw materials needed for a production run or a short period of time.
 - Eliminate storage by moving materials from receiving dock to manufacturing area to shipping, based on production schedules.
- ✓ Educate purchasing staff about the high cost of disposing unusable raw material.
- ✓ Use surplus inventory before the shelf life expires.

Bette Moran tears down engine components at Pacific Detroit Diesel. See Case Study page 4.

- ✓ Do not accept vendor samples if they can't be returned or used.
- ✓ Rotate inventory to ensure that older stock is used before newer stock.
- ✓ Ask vendors to help with your inventory control efforts.

requirements.

- ✓ Reduced disposal costs for unused and out-of-date materials.
- ✓ Reduced purchasing costs for raw materials.
- ✓ Decreased risk of spills because of reduced handling and storage requirements.
- ✓ Increased consistency (and predictability) of purchasing costs and material flow.

Getting Started

To improve inventory control in your facility, check which raw materials you will need, and when you need them. Coordinate decisions between those in charge of purchasing and those in charge of production and shipping.

This coordination is especially important if your company uses a wide variety of raw materials in different production operations for different products. Start by taking an inventory of your stored materials. Be sure to properly dispose of unusable and obsolete materials.

For More Information

Your trade association may have ideas for establishing or improving inventory control at your facility. Information is also available from the National Purchasing Institute (800)873-5780.

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Benefits of Inventory Control

- Increased production efficiency through Just in Time manufacturing.
- ✓ Reduced storage

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Sample Testing: Ask the Right Questions Before You Test

Do you need tests run on your company's wastewater, air emissions or other wastes? Before you send samples to a testing laboratory, or contract for sampling services, make certain that you know what tests need to be run. Laboratory analyses can be very expensive, so you want to make sure you don't request testing that is not necessary.

Start by asking the person or agency who requested the testing for specific instructions. Ask the following questions before you arrange for testing:

- ✓ When should samples be taken? For example: over a 24-hour period, when process is operating at full capacity, or at the end of the day?
- ✓ What types of wastes need to be tested? For example: air emissions, process baths or rinsewaters?
- ✓ What do the samples need to be tested for? For example: one metal or several, a specific solvent, volatile organic compounds (VOCs, or pH?)
- ✓ Do you need a representative sample? If so, how should it be obtained?
- ✓ Do you need a leach test or a totals test?
- ✓ Is a specific testing method required?
- ✓ What detection level will the test method need to achieve?
- ✓ Do you need to preserve or refrigerate the sample?

If so, ask your testing lab these questions:

- ✓ Is a "chain of custody" necessary to document transfers?
- ✓ How will the sample be disposed of?
- ✓ Will the sample require special shipping, packing and labeling?

Before you sample, be sure

you understand the testing directions given to you, or ask for clarification.

Reprinted with permission from the article by Donna Peterson, SOURCE, Spring 1994, published by the Minnesota Technical Assistance Program.

Choosing an Analytical Laboratory for Dangerous Waste Testing is available from Ecology, to order see the Bookcase on page 3.

Federal Grants Available

National Industrial Competitiveness through Energy, Environment and Economics NICE³ is a cost sharing grant program which teams state and industry partners to save energy, prevent pollution, and enhance industrial competitiveness. The program awards grants of up to 50% of the cost of qualified industrial projects. Nationwide, the Department of Energy and the U.S. Environmental Protection Agency have \$5-9 million for grants of up to \$400,000 each.

All industries can apply, with special consideration given to industries with high power consumption, relatively high emissions, and high pollution-control costs. Projects or approaches should demonstrate a high potential for adaptability by other industries.

Apply through a sponsoring state agency by submitting a pre-proposal project summary. For state review submittals are due **Oct. 13**, or submit a full project summary by **Nov. 21, 1994**. State contacts are:

<i>Tamie Kellogg</i>	<i>Virginia Hass</i>
<i>Dept. Ecology</i>	<i>WA State Energy</i>
<i>(206) 407-6741</i>	<i>Office</i>
<i>FAX (206) 407-6715</i>	<i>(206) 956-2171</i>
	<i>FAX (206) 956-2229</i>

Refrigerant Recall Update

Recently we told you about the recall of a flammable refrigerant. Well it's not over yet. Similar products have been found in other states. The products all contain propane and butane and are illegal for sale or use as refrigerants. The products are hazardous and will contaminate R-12 you may want to recycle. Beware of products called OZ-12 or HC-12a.

Waste Management & Pollution Prevention Loans

Small businesses can save money, increase worker safety and improve environmental quality by using pollution prevention strategies. Since this can take an initial outlay of cash, some businesses fail to achieve the long term savings which pollution prevention can bring. One way to finance your pollution prevention project could be through a U.S. Small Business Administration guaranteed Pollution Control Loan.

To be eligible you must be the owner or operator of a small business. The loan can be used for pollution prevention or for environmental regulatory compliance. Projects must be shown to help prevent, reduce, abate or control noise, air or water pollution or contamination. The project may involve removing, altering, disposing or storing pollutants, contaminants, waste or heat. Loans can also be for equipment which will be used for the collection, storage, treatment, utilization, processing or final disposal of a waste.

In addition, applicants must qualify based on standard credit and collateral criteria. Application procedure information should be available from the Small Business Administration section at your bank. You may prefer to contact the Small Business Administration directly at (206) 220-6550, or 220-6551.

Before applying, prepare a project plan and cost estimates. Projects accepted for financing must include a statement from the appropriate environmental agency validating that the project will benefit the environment.

If you need help in deciding whether a pollution prevention project will save you money please contact a hazardous waste specialist or toxics reduction staff listed on page 6 for project ideas.

Bookshelf

These materials are available from Ecology. To order call 1-800-633-7585 or (206) 407-6752

Choosing an Analytical Laboratory for Dangerous Waste Testing.

Information to help generators ask the right questions in choosing an analytical lab to test samples to determine if your waste designates as hazardous wastes.

List of Carcinogens (revised, June, 1994) This memo provides the most current list of substances considered to be "carcinogenic" under the Dangerous Waste Regulations.

Recovering Heat Energy While Burning Dangerous Waste: The Regulatory Status of a "Unit." Pub. #94-85

Technical Information Memorandum with updated guidance on the status of "units" that recover heat energy from burning dangerous waste.

Amendment to the Wood Ash Exclusion. FOCUS sheet details the regulatory exclusion for wood ash waste which designates solely because of corrosivity (high pH.)

Washington State Toxic Release Inventory: Summary Report: 1991 and 1992, Pub.#94-91A, and, Public Data Release: 1991 and 1992, Pub. # 94-91B.

Summary of information submitted by manufacturing facilities in Washington.

Guidance for Assessing and Certifying Tank Systems Storing and Treating Dangerous Waste. Pub. #94-114

New guidance document.

Step by Step: Fact Sheets for Hazardous Waste Generators

Glossary and ten easy to use fact sheets to answer your hazardous waste management questions.

"Snapshots" Campaign
Screen printers, "one-hour" photo mini-labs, lithographic printers and screen printers are all industries with excellent pollution prevention potential. This fall Ecology and local government staff will conduct hundreds of technical assistance visits to these businesses. This effort, the "Snapshots" Campaign, will give businesses a chance to learn about compliance through voluntary visits. Trained staff will help show business operators how to identify and implement practical pollution prevention measures and will explain regulatory compliance issues.

Facilities will receive an initial check-list in the mail, then a visit will be scheduled. The visit starts with a walk-through evaluation of the process. Staff will make suggestions about air, water, solid waste and hazardous waste environmental compliance and pollution prevention issues. Owners and operators will receive specific educational booklets and written recommendations.

The visits should increase economic fairness for businesses which already comply with Ecology regulations by educating more shops. For information call Darin Rice (206) 407-6743.

Winning Businesses

Winners of the Ecology Solid Waste Reduction and Recycling Awards this spring reduced and recycled both solid and hazardous wastes. The Best Business Waste Reduction and Recycling Award went to Microsoft Corporation in Redmond. The Best Government Options to Landfill Disposal (G.O.L.D.) Program Award went to Seattle Central Community College.

Highlights of the Microsoft program include company goals to reduce, reuse, recycle and repurchase as much as possible. Used printer toner cartridges are collected and refilled, computer hardware is refurbished and components from old equipment are harvested for reuse.

Seattle Central Community College implemented a policy to substitute nontoxic products for toxic materials used for custodial work. The photography lab has recovered 93 ounces of silver with its silver recovery unit. A refrigerant recovery unit was installed in the cafeteria to collect CFC's.

Many other prizes were awarded for waste reduction and recycling efforts. For more information contact Tim Gaffney at (206) 407-6128.



ShopTalk

Mailing List Change Form

Please make the following Changes:

- ✓ Remove me from your mailing list
- ✓ Add me to your mailing list



Name: _____

Business: _____

Nine digit Revenue Code: _____

Address: _____

City: _____ State: __ Zip: _____

Mail to Address on Reverse side. Please allow 6-8 weeks for delivery/changes.

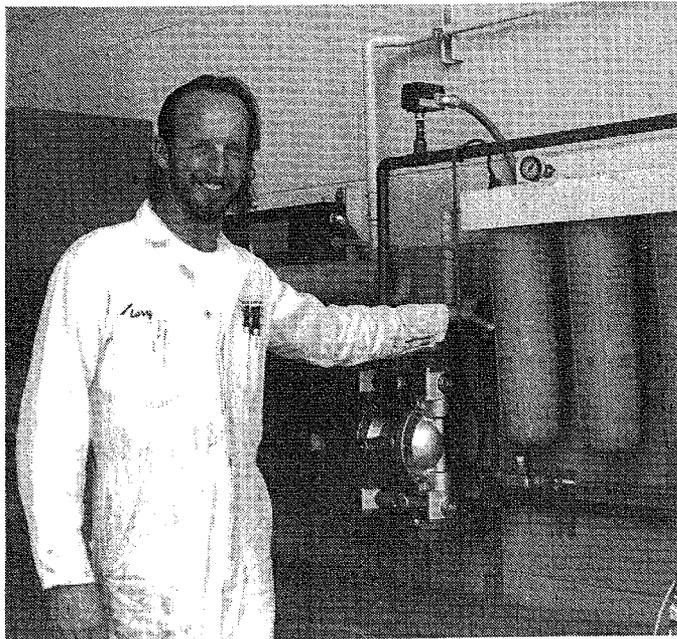
Case Study: Pacific Detroit Diesel, Kent

Jerry Tyrell, president of this diesel repair business decided to protect his workers and eliminate waste when he designed his new facility in Kent. The new facility is a model of waste management design. It is safer for workers and healthier for the environment than the old facility which the business had outgrown.

Service manager Randy Day estimates that hazardous waste and sludge disposal costs were \$62,000 a year at the old location. By investing \$67,000, just over one year's disposal costs, the company has permanently eliminated hazardous waste disposal costs. According to Day, the facility found that the changes have been terrific. "We are going to save money on everything, everywhere we turn!," he said.

The design includes a pressure wash system with a closed-loop recycling system, a bake oven, and a large cabinet washer with a filter system to reuse the water. The oven sludges are tested but do not designate as hazardous wastes. Floor drains at the shop are connected to the pressure wash system and the water is reused. The new pressure wash system uses only 1% of the water and runs on less energy than the old liquid parts washer system. Spot cleaning on the floor is done as needed, while an automatic floor scrubbing system is used for regular cleaning.

The business saves money because workers no longer need protective gloves and face shields, or corrosive soap, and other toxic cleaners. Manager Day feels good about eliminating materials which contained skin and eye irritants which could hurt his workers and had resulted in worker's compensation claims. He expects to see increased productivity and decreased costs at this innovative facility.



Larry Slick, Special Projects Manager at Pacific Detroit Diesel examines the water recycling system used at the new Kent facility. The system is just one part of the company plan to eliminate wastes. Also targeted were air emissions, energy use and waste generation.

With strong management leadership, dedicated employees, such as Slick, attend regular pollution prevention meetings. Research chemists test the system output and continue to research for new pollution prevention opportunities.

NW Waste Info Expo

The fifth NW WIN Expo will be held October 25-26. This training conference will focus on information businesses need to reduce waste and recycle. Billed as the largest waste management event in the northwest, the show will feature 140 exhibit booths and 52 technical seminars conducted by industry and government experts. Expo '94 will be at the Seattle Center Exhibition Hall. Preregistration is \$25 (\$35 at the door).

The Expo is sponsored by the Waste Information Network and the Neighborhood Business Council, and cosponsored by the Puget Sound Business Journal, King County Commission for Marketing Recyclable Materials, and the Business and Industry Recycling Venture, with major funding by the Local Hazardous Waste Management Program of King County.

Call (206) 823-9087 for more information.



Pollution Prevention Adopted Agency-Wide

Ecology has adopted a Pollution Prevention Strategy throughout the agency. The strategy is designed to incorporate pollution prevention into all environmental functions of the agency. It will refocus the agency on prevention and conservation. Some things to look for:

- ✓ Pollution Prevention will be incorporated into the waste, water and air agency functions, with all working together.
- ✓ Informational materials will consistently emphasize prevention.
- ✓ More emphasis will be placed on "Shop Sweeps" and "Snapshots" type educational projects for other industry groups.
- ✓ Our permitting, fee, and monitoring systems will be reviewed to encourage pollution prevention (e.g. the less waste you produce, the lower your fee.)
- ✓ Economic incentives to reduce pollution will be researched.
- ✓ Staff will take and offer training on Pollution Prevention principles.

Tom Eaton, former manager of the HWTR program, has been selected by Director Mary Riveland to coordinate these efforts and carry out strategy.

Designation, State Criteria, and "Special Knowledge"

As a generator you may not be aware that Dangerous Waste Regulations have special designation requirements or "criteria" that apply only in Washington State. You may need to determine if your waste is hazardous under these "state criteria." The criteria under which a waste may be hazardous are if the waste is:

- ✓ **toxic** (harmful to humans or animals),
- ✓ **carcinogenic** (cancer causing), or
- ✓ **persistent** (stays in the environment for a long period of time or concentrates in living organisms).

In addition, even when generators are aware of these three "state criteria", they often do not know when they have to test for them.

Do you have "Special Knowledge"?

Generators must designate their waste for one or more of the state criteria if they have "special knowledge". This means that you have some reason to believe that your waste may be toxic, cause cancer, or persist in the environment. For example, your MSDS sheet may state that your product is toxic, or you may have read or heard that the chemicals you use in your shop cause cancer. If you have this knowledge, you must determine if the waste fails one or more of the state criteria by designating the waste as defined in the "Dangerous Waste Criteria" section of the regulations (Section 100).

Ecology can also require you to test for these criteria if certain conditions are met. The following are examples of generators who, because of "special knowledge" must proceed with the designation procedures for state criteria wastes.

Toxic "Special Knowledge"

A generator has expired photo developer. He reads on the MSDS sheet "Oral Rat LD50 of 4500 mg/kg." He knows this means the waste is toxic since it kills rats at a certain concentration. Since he has knowledge that the waste is toxic, he is required to designate the waste.

Carcinogenic "Special Knowledge"

A generator wants to discard a pesticide which contains 2% of a known active ingredient. The generator has access to a copy of Ecology's updated "Carcinogens list". She looks up the ingredient on the list and finds it there. She now has knowledge that a component of the waste causes cancer. She must designate the waste pesticide as a carcinogenic waste, since it exceeds the 100 ppm (0.01%) regulatory threshold.

Persistent "Special Knowledge"

A generator has a petroleum based solvent and reads the label on the bottle. One ingredient is methylene chloride. Methylene chloride is a halogenated hydrocarbon, and therefore persistent by definition (WAC 173-303-040), since it does not break down readily. Therefore the generator has special knowledge that his waste may be dangerous. Any waste which contains more than 100 ppm (i.e. 0.01%) of any halogenated hydrocarbon is a persistent dangerous waste. The generator must use testing or product information to see if methylene chloride in the waste exceeds 100 ppm. If it does, this waste must be designated as a persistent dangerous waste.

Waste Codes

Once a generator has designated a waste, the correct state waste code must be applied.

 **CAUTION:** If you decide not to test your waste, be certain of your judgement as you are fully liable under the regulations to properly designate your waste. If your waste is found to be dangerous, and the waste has been improperly managed, you may be fined, required to conduct a cleanup and even criminally prosecuted if certain conditions are met.

If testing is done, results should be kept for at least five years.

If you have questions about anything mentioned in this article, please call your regional Ecology hazardous waste specialist, listed on page 6.

Update on New Annual Report Forms (4 & 5)

In 1995 new and improved annual report forms will be used. Use the old forms you have to describe 1994 waste management and generation activities. In March 1995, submit the old forms to Ecology as usual to report wastes generated in 1994.

The new forms will be distributed before January 1, 1995. Use them to collect information in 1995. Make sure that you read the new forms carefully so that you collect the right types of information. You must submit your completed forms to Ecology in March 1996.

Ecology will be conducting trainings on the new forms later this year and throughout 1995. For dates and times call Joanne Phillipson at (206) 407-6735.

Q Is Ecology going to change reporting requirements for 1995?

A There will be major changes, designed to improve the reporting process. The new forms will be mailed out before January 1995. Use them to report wastes managed in 1995. In March 1995, use the old forms to report wastes generated in 1994.

Q You seem to encourage us to call the regional offices for help. How do I know Ecology staff won't use my questions as an excuse to come out and do a compliance inspection?

A Callers can get information from both Toxics Reduction staff and Compliance staff. Ecology has designated certain staff who **will not** arrange for a compliance inspection based on your call. Toxics Reduction staff deal mostly with pollution prevention, and do not have enforcement authority. Compliance staff play an important role in educating. They are responsible for compliance, but spend most of their time providing technical assistance.

When any staff make a technical assistance visit the primary purpose is help the facility with

Ecology issues. If violations are obvious, the generator will be asked to correct the problem, but will be given a reasonable amount of time to do so.

Toxics Reduction staff and Compliance staff are under executive orders **not** to take any immediate enforcement action during **technical assistance visits**. Staff may only do so if there is an imminent threat of serious danger to human health or the environment.

By speaking with our staff you can be sure that you are doing the right thing and can avoid accidental noncompliance.



Shoptalk Changes

With this issue we will be using a new mailing list. Please help us get the bugs out by sending in the form on page 3 if any changes are necessary. Bonnie Meyer returns as editor this issue. Please send her questions you'd like to see answered in this section. If you have had success in implementing a pollution prevention strategy please give her a call at (206) 407-6749 and your business may be featured.

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: (206) 407-6300

Yakima: (509) 575-2490

Spokane: (509) 456-2926

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Shoptalk

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