



Shoptalk

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publication for
hazardous waste
generators

Choosing a Safety Coordinator

The safety coordinator can boost staff morale, promote good work habits, increase efficiency and ensure that staff are ready and able to deal with the unexpected. *Shoptalk* (Summer 1993) described the importance of emergency preparations for businesses handling hazardous materials or generating dangerous wastes. All regulated generators must have an emergency coordinator, who has some very specific responsibilities. Facilities often select a "safety coordinator" to fill this position.

Nelson Bekkering, of Bekkerings Automotive in Spokane explains how he faced, "laws and regulations (that) seemed too complicated and frequently changed." He hired Don Ganyo to start his program for him, since he says "neither myself nor my mechanics had the time to be the (safety coordinator)."

Choosing the right person to be your safety coordinator will benefit your business. The wrong person could get you and your business into trouble. Do not assign the job to a disinterested worker. This may leave your business vulnerable in an emergency, employing out-of-date procedures and failing to take advantage of money and labor saving advances in waste reduction and efficiency.

Bekkering suggests that the best qualifications for a safety coordinator are: "orderliness, a desire to keep the shop clean, and to set the example and motivate others to do the same. Finally, choose someone who has a pleasant personality and a genuine interest in protecting the environment and the employees from hazardous waste and chemicals."

Here are some qualities to look for to find the best person for the job:

- ✓ Consistent attention to detail. He or she will keep a log, track MSDS's, conduct inspections, label containers, post and update emergency informa-

tion, train and monitor employees and maintain records.

- ✓ Ability to relate well to other staff, to be sincere, enthusiastic and patient.

- ✓ Persistence and the ability to be persuasive about ideas such as proper waste management and waste reduction.

- ✓ A commitment to health and safety, an above average safety record will help to set a good example.

- ✓ Interest in maintaining and continuing health and safety training. The safety coordinator needs to keep current on regulatory requirements, first aid/CPR and emergency procedures.

- ✓ Cooperative work habits, ensure that he or she knows always to be tactful even when being firm correcting and advising fellow workers.

- ✓ Resourceful, able to find practical, inexpensive solutions to environmental problems. Being able to bring out ideas in other employees, and encourage them to try new things.

Management support for employee safety and health issues will be appreciated. Give your safety coordinator the authority to make changes and to instruct staff. A safety coordinator needs funds to purchase supplies and education materials. She or he also needs time set aside to meet with workers and provide demonstrations, for example spill clean-up drills. Videos, speakers and other educational materials are also available (often free) from state and local agencies.

Paul Jaremko, owner of Jaremko Nissan in Spokane says he couldn't be more pleased with Victor Hill, his safety coordinator and Environmental Control Manager. Using a team approach, he says Jaremko found employees "completely receptive to ways of reducing and eliminating wastes by using alternative products and processes." Jaremko adds, "Our hiring of a (safety manager) has added new insight to business management and has been a positive direction for our facility."



Greg Loberg, Service Manager and Vic Hill, Environmental Control Manager check labels at Jaremko Nissan in Spokane

**Proposed Changes:
Dangerous Waste
Regulations**

In June 1993, the Hazardous Waste and Toxics Reduction Program filed proposed rule amendments to the Dangerous Waste Regulations. The public made many comments on the changes and we are now reviewing all of them. Ecology will use this public feed-back to decide if any revisions in the proposed amendments are needed before filing the final rule amendments later this year.

Here are some of the highlights:

- ✓ The section on accumulation was revised to be more clear about accumulating dangerous waste in satellite areas
- ✓ An exclusion was added for wood ash generated from burning untreated wood
- ✓ A treated wood waste exclusion and a domestic sewage exclusion have been proposed
- ✓ The section on designating waste has been rewritten to be more clear
- ✓ The "state-only" waste designation sections of mixtures, toxicity, persistence and carcinogenicity have been combined into one section
- ✓ Generator requirements for "treatment by generator" were added (see Summer '93 *Shoptalk*)

Remember, the final changes will not be effective until early next year. *Shoptalk* will continue to keep you up to date.

**Re-evaluating Hazardous
Waste Reporting Forms**

Ecology's Hazardous Waste and Toxics Reduction Program is developing new hazardous waste reporting forms. Starting in January 1994, the new forms will replace the existing Hazardous Waste Annual Report forms. The new forms will reduce generator paperwork by requiring only essential information.

Ecology worked with trade associations and environmental interest groups, plus those who previously expressed interest in Ecology efforts, to find out what information they felt would be useful to collect and how. Thanks to their comments, the 154 pieces of information considered were reduced to just 91. Thirty percent of the items were dropped as nonessential.

Designing New Forms

In early October, 1993 the new forms will be designed. Generators should find the forms clearer and easier to use and fill out. Ecology will conduct a pilot-test of *draft* forms. A group of generators will fill out the forms and let Ecology know if they find them to be an improvement. These comments will help Ecology evaluate fix the draft forms to make the final forms user-friendly.

When to Use the New Forms

Get your paperwork ready for the 1993 reporting cycle.

- ✓ In **March, 1994** use the "old" hazardous waste Forms 4 & 5 for reporting the 1993 calendar year.
- ✓ In **1994** the report forms will change, expect to see the new forms in the mail by **January 1994**.
- ✓ In **March of 1995** the new forms will be used for the **1994** reporting cycle, which begins in **January 1994**.

PCB Alert

The recent closure of Ross Electric in Chehalis leaves Washington State with one less facility to manage transformer, capacitor, and bushing oils containing Polychlorinated Biphenyls (PCB's). These wastes with PCB in concentrations of 1-50 parts per million are designated W001 waste and are regulated by the state.

While there are no state facilities which incinerate or landfill PCB's, there are a number of treatment and storage facilities which can receive PCB wastes from generators for shipment to disposal facilities in other states.

Generators with PCB articles must rinse them using a prescribed rinsing procedure, before the articles are no longer regulated. The PCB oils and rinsates are classified as dangerous wastes, and must be sent to a TSD facility.

Alternatively, used oil designated as W001 wastes may be sent to a used oil fuel blender in accordance with Dangerous Waste Regulations. Make sure that PCB contaminated oils are kept separate. Remember blending is not considered recycling. If you have questions about disposal of PCB wastes, please call your regional Ecology office listed on page 6.

The following facilities have at least EPA interim status and may be used to arrange for disposal of PCB's:

Burlington Environmental 734 S. Lucile St. Seattle WA 98108 (206) 223-0500	Envirosafe Services of Idaho Missile Base Rd Grand View ID 83624 (800) 274-1516
Burlington En 20245 77th Ave. S Kent WA 98032 (206) 872-8030	General Electric Co 2535 NW 28th Ave. Portland OR 97210 (503) 221-5097
Burlington En. 625 S. 32nd St. Washougal WA 98671 (206) 835-8594	Northwest Enviro Service 1500 Airport Way S Seattle WA 98134 (206) 622-1090
Chemical Waste Management 17629 Cedar Springs Lane Arlington OR 97812 (503) 454-2643	<i>PCB's excluded by rule onl</i> Eastern Electric Apparatus 10831 E. Marginal Wy Seattle WA 98168, (206) 767-9506

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Bookshelf

These materials are available from Ecology. Call 1-800-RECYCLE or (206) 407-6719.

Treatment by Generators, Technical Information Memo, No. 86-3. How generators may treat their own dangerous wastes on-site.

Fact sheet 4. Perform Preventive Maintenance. Checklist to use in accident prevention.

Fact sheet 6. Plan for Emergencies. Clear guidelines of required emergency procedures for businesses generating more than 220 lbs per month or batch of hazardous waste.

Success Stories Volume III. Seven Washington businesses share their experiences with pollution prevention planning.

PCB Discussion Paper. Description of the effects of PCB waste regulations and answers to relevant questions.

Motor Vehicle Emission Check: Program Information and Tips. Describes Washington's vehicle emission testing program. Explains testing procedures and lists retesting and repair requirements.

Cost Analysis for Pollution Prevention. A guidance document that can help compare the total costs of a current process to the total costs of a pollution

Hazards of Flammable and Toxic Vapors

When are 14 sticks of dynamite, 45 pounds of TNT and a gallon of gasoline alike? When you compare their hazards based on total energy. The real hazard of a product depends on how it is used at your workplace.

In an effort to prevent pollution, many businesses are considering switching from toxic materials to products which are safer substitutes. They want to see real reductions in hazardous waste generation and hazardous material use. It can be difficult, however to compare the hazard of using one product versus another. While material safety data sheets (MSDS) provide some hazard information, they do not (and cannot) translate flash point or exposure limits into risk to your workers.

Most product labels give instructions to use adequate ventilation, to minimize fire hazard or exposure to toxic vapors. Since the term adequate is not defined, the user has no way to know under which conditions the product is safe to use. Two key characteristics to look at are the ability/likelihood of the material to ignite, and the health risk associated with inhalation of vapors.

The simplest way to compare the fire hazard of different materials is to look at their flash points. Manufacturers are required to test their products for flash point and must include these results on labels. Based on flash point products are ranked as, extremely flammable (most flammable), flammable (less flammable,) and combustible (least flammable.)

What the flash point method fails to consider is the severity of the fire, i.e. the amount of energy released upon vapor combustion. For example, methyl alcohol has a flash point of 54 degrees and a combustion energy of 64,500 Btu/gal, whereas octane, with a similar flash point of 60 degrees has a much higher combustion energy, 89,500 Btu/gal. Thus, a gallon of octane can do more damage than a gallon of methyl alcohol, even though their flash points are nearly the same.

A term called the flammability hazard index takes this into account. It combines three factors, 1) risk of ignition (flash point), 2) the energy of combustion, and 3) the volume of air required for dilution to a non-explo-

sive concentration, to give a numeric rating that can be used to compare hazards.

A method to compare the health hazard of different products is to calculate the "toxic injury potential" which is the sum total of the volume of air required to dilute each toxic component to its allowable exposure concentration. This gives you an idea of what "adequate ventilation" means in order to safely use a gallon of product.

Additional points to consider:

- ✓ The ventilation required to keep vapors below toxic concentrations may be more than 50 - 100 times greater than the air required to prevent ignition (in this case the health hazard to you may be far greater than your fire hazard).
- ✓ How a product is used has an impact on hazard. For example, a lower hazard product that is sprayed may pose a greater risk than a higher hazard product that is rolled or brushed.

- ✓ The hazard factors do not take product performance into account. In other words, you may switch to a lower hazard product, but because it doesn't work as well as your original product, you may end up using twice as much product.

Extracted with permission from "Hazardous Ratings of Flammable and Toxic Vapors", Ray L. Hauser et al, Profession Safety Journal, July 1993. This article gives a detailed description of how to do the calculations. Call the editor at (708) 692-4121 for more information

Northwest Waste Information Expo '93

The largest business and environmental event in the Northwest will be held November 9 & 10 at the Seattle Center Exhibition Hall. The fifth annual Northwest Waste Information Expo is a joint project of the Waste Information Network and the Neighborhood Business Council with other local co-sponsors. The event focuses on managing and reducing solid and hazardous wastes.

52 technical seminars will be conducted by industry and government experts plus 140 exhibit booths to visit. Register for \$25 now, or \$35 at the door, call (206) 623-8632 for event brochure and information.

Case Study: *Planning Saves Money and Resources*

Dowty Aerospace Yakima employs 249 people to produce aircraft hydraulic devices. The recent downturn in the aerospace industry challenged Dowty to become "leaner and meaner" to remain competitive. Through pollution prevention planning, Dowty found opportunities to save money and reduce waste problems.

George Knight, Dowty production manager, first changed the machine coolant management system. Contaminants are kept out and more coolant recovered by enclosing machine tools and slowing the process to allow for coolant separation. New recycling equipment pays for itself through raw materials savings, less disposal costs and less machine downtime. Dowty also installed efficient spray guns and replaced their vapor degreaser with a safer cleaning system. These changes will keep the company ahead, says Knight who looks at future risks and stays abreast of rapid technological and regulatory changes.

Ashley Patterson was hired to write Dowty's pollution prevention plan. She and Knight found Ecology toxics reduction staff in Yakima willing to take a proactive role in helping them develop the pollution prevention plan. Ecology staff visited the facility, researched information on new processes, offered planning workshops, and listed other businesses that might be helpful contacts. "We appreciated knowing we had someone we could call," says Knight. Patterson added "The staff had the philosophy that the goal was to solve the problem. They encouraged us to ask questions and showed us that they were really willing to help."

Patterson advises other plan writers to, "ask a lot of questions of workers; get them involved in the planning process. Talk to other companies willing to share their experience and knowledge, as well as suppliers. So many companies aren't sure who to call, but we found Ecology ready and willing to help us."

Reuse Heat, Remove Contaminants, Improve Air

Maintaining indoor air quality used to be as simple as increasing ventilation. This disperses contaminants and uses a lot of energy. Instead use properly designed capture hoods directly over the sources of contamination. The exhaust air can be filtered to remove particulates, and some vapors and gases. The treated air can then be reused as make-up air. Be sure to use a designated filter and inform Ecology's Air Program of construction to obtain permits.

Exhaust air from process equipment usually contains heat that can be recovered and returned to the processes. The heat can be used in air or liquid flow streams. The Electric Ideas Clearinghouse can provide free information and case studies on how to recover heat from many exhaust streams. Call them at 1-800-872-3568 for more information, or use the electronic Bulletin Board at 1-800-762-3319.

Thanks, Planners

Congratulations to the many Washington generators who sent in Pollution Prevention Plans and Annual Progress Reports by the deadline. The toxics reduction staff at all four regional offices were pleased to receive so many plans on time and in good order. Ecology would like to encourage those of you who have not sent in your plan or report to do so now. Businesses which generated between 7,000 lbs and 5,000 lbs of dangerous wastes this past year, and TRI reporters worked closely with Ecology's technical assistance staff to identify pollution prevention opportunities at their facilities.

Your contact person will be in touch to let you know how the plan review is going. It's never too soon to implement your plan, especially where there are savings involved.

Plans due in 1994: *Notifications Sent out to Generators*

Certain facilities were recently notified by Ecology that they must prepare Pollution Prevention Plans under the Hazardous Waste Reduction Act of 1990. The facilities contacted are those that annually generate 2,640 lbs. or more of hazardous waste, and have not yet participated in the planning process. Other facilities contacted had reported toxic releases in 1992 for the first time under SARA Title III, Section 313. Plans are due September 1, 1994.

Nearly 260 facilities must

Annual Progress Reports

Progress reports, from facility operators who submitted Pollution Prevention Plans last year were also due on September 1, 1993. According to the progress reports, many facilities have implemented some recommended measures and are already reaping the benefits of pollution prevention. If you prepared a plan in 1993, your first annual progress report will be due September 1, 1994.

Recycling Credits

Those businesses which qualify for recycling credits must be sure to provide off-site recycling information on their annual Dangerous Waste Generator Reports (Form 4). If you have enough recycling credits you may not be required to submit a pollution prevention plan.

complete new plans. Each facility is assigned an individual contact person who will guide them through the planning process and help identify waste reduction opportunities. If enough hazardous waste reduction is achieved, the facility may drop out of the planning process.

If you have questions or need information about the planning requirement, contact a toxics reduction specialist at one of Ecology's regional offices listed on page 6.



Jeom Lee of Lee's Automotive

Maintenance Shop Owner Affected by New Air Regs

Shoptalk spoke with Jeom Lee, of Lee's Automotive in Seattle to find out how auto maintenance shops are being affected by the new air regulations. Lee purchased an emissions testing device two years ago, and believes Ecology gave him enough time to train his staff and prepare his business. He finds the device works well. Lee thinks that the higher emissions control standards are a good idea. There's already too much pollution he said, "Everybody wants fresh air. Everybody wants the Evergreen State to stay a good clean state""

Lee says regular customers are willing to spend an extra \$250 to pass the air emissions test since it's part of their overall service and maintenance. Many customers confide that they know they should fix their vehicles to run efficiently, but they just cannot afford repairs of over \$250.

Maintenance shops can do a lot to improve air quality inside their shops too. This can result in less hazardous waste generated. Some ideas include:

- ✓ Keep solvent containers firmly covered
- ✓ Consider switching to less toxic (i.e non-chlorinated) solvents, greases and paints
- ✓ Paint only in paint booths
- ✓ Wear protective breathing masks
- ✓ Clean up spills immediately
- ✓ Minimize use of hot caustic tanks
- ✓ Wring out shop towels wet with solvents and reuse the liquid
- ✓ Keep shop towels in a closed labelled container
- ✓ Consider using a cabinet parts washer

New Air Regulations

Businesses which generate hazardous waste or use hazardous materials will be affected by recent air quality regulation amendments. The major impacts will affect the emission check program, recycling and recovery of chlorofluorocarbons (CFCs), and gasoline vapor recovery.

Vehicle Emission Tests

Metropolitan areas of Clark, King, Pierce, Snohomish and Spokane counties do not meet federal health-based standards for carbon monoxide, and are now required to have vehicle emissions checks. All 1968 and newer gasoline and diesel-powered vehicles registered in these areas must be inspected every other year. The exhaust emitted from gas-powered vehicles is tested for carbon monoxide and hydrocarbons. For diesel-powered vehicles, exhaust gas density is measured.

Owners of vehicles which fail the emission check get a list of Ecology authorized Emission Repair businesses for diagnosis and repair of the emission problem. A vehicle that fails the test cannot be re-registered until it passes. If a vehicle fails a second test, it may be eligible for a waiver from meeting emission standards if two criteria are met:

- ✓ Repairs are done by an Ecology authorized Emission Repair shop.
- ✓ and, the owner has spent at least \$100 on emission related repairs for 1968-1980 vehicles, or \$150 for those 1981 and newer.

Starting June 1, 1995, gasoline-powered vehicles 1981 and newer will be inspected to see if their pollution control systems have been removed or altered. Vehicles with altered or missing emission control equipment or illegal engine changes will fail the inspection.

For more information call the Vehicle Emission Information Line at 1-800-453-4951.

CFC Recovery

Intentional release of ozone-depleting chemicals into the air is banned pursuant to the Dangerous Waste

Regulations and the Clean Air Washington Act. Recycling, recovery, and/or reclamation of CFCs is required. CFC generators are not required to manifest or transport spent CFC refrigerants as dangerous waste when the CFCs are reclaimed or recycled. If CFCs are disposed, they are regulated as dangerous waste.

For additional information contact Pat Norman at (206) 407-6851.

Gasoline Vapor Recovery

Gasoline vapors emitted during bulk transfer of gasoline and during vehicle refueling must now be recovered. When gasoline is transferred in bulk, the gasoline vapor recovery is called Stage I. An example of this type of recovery occurs when gasoline is transferred from a terminal to a truck or from a truck to an underground storage tank. Stage II recovery is gasoline vapor recovery during motor vehicle refueling. Many terminals, bulk plants and gas stations in Washington, depending on their location and the amount of gasoline they handle, must install gasoline vapor recovery systems according to updated Stage I and Stage II vapor recovery deadlines.

For information call Sandi Newton at (206) 407-6826.

New Business Assistance Program: Air Quality

The new business assistance program within the Air Quality Program is now open. They'll be providing assistance to businesses on five key issues:

- ✓ Preventing air pollution, including accidental releases
- ✓ Production process changes, material substitutions and equipment modifications
- ✓ Air pollution laws, technology and compliance measures
- ✓ Obtaining air permits
- ✓ Health and environmental effects of air pollution

To contact the business assistance center call Judy Schwieters at (206) 407-6804

Questions and Answers

Q Our company has saved millions of dollars nationwide by compacting rags and gloves contaminated with heavy metals to reduce the volume of these hazardous wastes. Is it okay to put contaminated shop rags through a compactor before sending them to a hazardous waste disposal facility?

A Yes, you may compact rags contaminated with heavy metals or ignitables. Compaction is not considered a treatment since it does not render the waste less hazardous or non-hazardous. A hazardous waste treatment permit is not required if you are only compacting rags/gloves and other items. A hazardous waste transporter may consolidate and bulk certain manifested shipments at a transfer facility for up to 10 days. Storage for more than 10 days at a transporter site requires a hazardous waste permit. Small quantity generator wastes may be legitimately stored for over 10 days at a permitted moderate risk waste facility.

Recycling Credits Explained

Facilities which annually generate more than 2,640 lbs. of hazardous waste are required to prepare pollution prevention plans under the Hazardous Waste Reduction Act of

1990. Facilities earning and claiming recycling credits can be excused from planning and can save money on the annual planning fee.

What are recycling credits? The Act and the rule implementing the Act stipulate that, for the purposes of this Act only, hazardous waste reported on the annual Dangerous Waste Generator Report (Form 4) as having been either recycled on-site or recycled for beneficial use off-site shall not be used in the calculation of hazardous waste generated.

A facility may use recycling credits to subtract the amount of waste recycled from the amount of waste generated. For example, if a facility reports 5,000 lbs. of hazardous waste, but shows 3,000 lbs. were recycled, this means only 2,000 lbs. of waste is counted. The facility now falls below the 2,460 lb. threshold and doesn't need to prepare a plan.

Facilities required to plan also pay an annual hazardous waste planning fee. Recycling credits may reduce the amount of the fee. The fee is calculated by considering the pounds of hazardous waste generated discounted by the amount of wastes recycled.

To claim recycling credits use the Form 4. Look at column K and read the instructions included. For further information and assistance call Holly Sullivan at (206) 407-6733.

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

Tumwater: (206) 753-2353

Yakima: (509) 575-2490

Spokane: (509) 456-2926

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