HAZARDOUS WASTE

WASHINGTON STATE DEPARTMENT OF ECOLOGY

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A PUBLICATION FOR HAZARDOUS WASTE GENERATORS

Go "Lean" for Profit and Pollution Prevention

Managing hazardous waste can be expensive. Handling, storing, tracking, reporting, disposing —all take employee time and use resources, eating into profit margins. But there are ways to reduce these costs and free up your resources. One way is "lean manufacturing."

Lean manufacturing is a group of techniques to improve the efficiency of production operations. It's based on principles that make both economic and common sense. Essentially, it minimizes any activity that does not directly contribute to the product or service you are trying to sell. That covers more than just materials; it could be down or wait time, rent and utilities for unnecessary facility space, or dealing with defects.

Some examples of this in waste management are contaminated site cleanups, spills, controlling emissions, waste treatment, extra requirements for hazardous materials, and regulatory paperwork and reporting. Lean manufacturing does not advocate doing away with proper hazardous waste management; such work protects human health and the environment. But it does suggest that the most efficient way to eliminate these drains on your time and resources, your "get out of jail free card" so to speak, is to eliminate using those hazardous substances. Or to reduce the use. Or to make sure that spills, defects, etc. don't occur.

These are not "pie in the sky" ideas. Some Washington State companies, such as G. Loomis in Woodland and Precision Aerospace in Sumner, have applied lean manufacturing principles and realized major improvements. G. Loomis reduced the process time it takes to build a fishing rod from 22 days to four. Precision Aerospace reorganized a crowded facility and maintained production levels with half the number of employees.

Start with the "5 Ss" to create a more functional workspace:

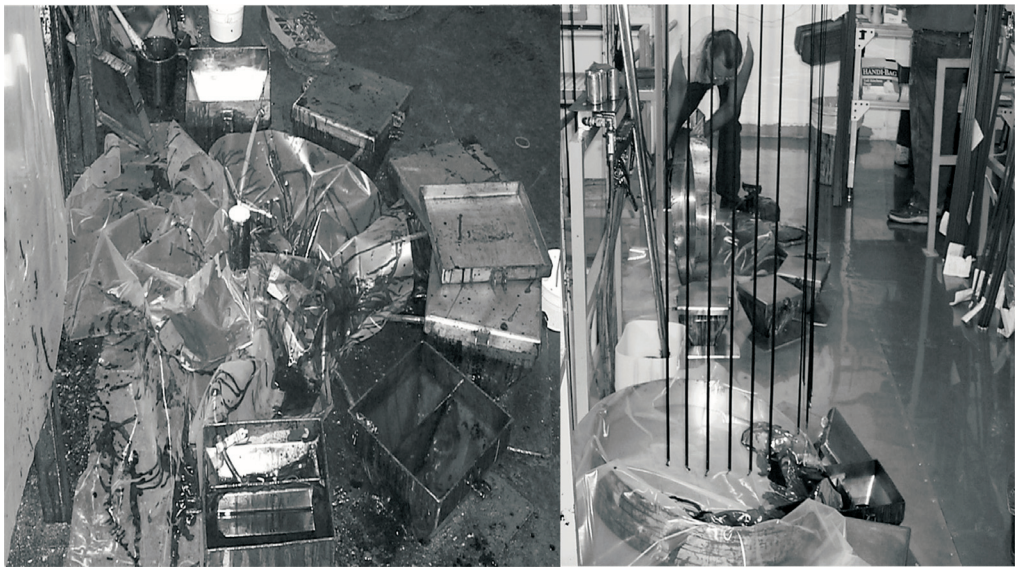
- ✓ **S**ort: eliminate unnecessary stuff
- ✓ **S**etup: organize what's left
- ✓ **S**hine: clean and repair
- ✓ **S**tandardize: label, mark limits, set boundaries
- ✓ **S**ustain: use a system for keeping it this way

Another technique that helps is to create a "visual workplace" of posted photos showing how the workplace should look. This overcomes staffing changes, language barriers, and other hindrances to sustaining the system.

Other techniques go beyond housekeeping. Reducing change-over times and machine or process set-up times can also help. For example, if production lags while paint guns are cleaned to change color, provide dedicated equipment for each of the most-used colors.

According to Washington Manufacturing Services, a not-for-profit organization that helps make Washington businesses more competitive, lean manufacturing can reduce production time by 90 percent, increase productivity by 50 percent, and reduce "work in progress" by 85 percent.

For more information on lean manufacturing, visit the Web site of Washington Manufacturing Services, at *http://www.wamfg.org* or the Northwest Lean site at *http://www.nwlean.net.* Washington Manufacturing Services also provides a training and certification program in lean manufacturing. Call Robin Horrell at (425) 438-1146.



The "dip room" for coating fishing rods before and after G. Loomis implemented the "5 S" steps in lean manufacturing. (Photos courtesy of G. Loomis)

Register Now for 2005 Generator Workshops

The schedule is set for the 2005 Dangerous Waste Management Workshops, the one-day, low-cost training provided by Ecology's Hazardous Waste & Toxic Reduction Program. The workshops cover proper waste management, how to comply with the dangerous waste regulations, and how to increase profits by reducing waste. They are also a chance to ask Ecology staff questions about regulations, wastes, etc. in a relaxed atmosphere. In a change from past practice, the workshops will not include training in annual reporting. (See *TurboWaste.Net Has a New Look* in this issue.)

2005 Workshop Schedule

Date	City
January 25	Tacoma
January 27	Kelso
February 1, 2 & 3	Shoreline
February 7	Yakima
February 9	Spokane

Register now! Space is limited. The full-day training costs only $55, which includes lunch and materials.

Register on-line at *http://www.ecy.wa.gov/forms/dwmw/index.htm*, fax your request to Lori Gonzalez at (360) 407-6715, or contact her at (360) 407-7118, or *lgon461@ecy.wa. gov*.

Dangerous Waste Regulations Update

Amendments to the *Dangerous Waste Regulations* (Chapter 173-303 WAC) become effective January 1, 2005. (See *Upcoming Changes to the DW Regulations* in *Shoptalk*, vol.14, No.2, #04-04-002). A Focus sheet highlighting the changes will be available soon and copies of the revised regulations will be available at the 2005 Generator Workshops. For the latest information, go the HWTR Program website at *http://www.ecy.wa.gov/programs/hwtr/index.html* or call Chipper Hervieux at (360) 407-6756 or e-mail her at *pher461@ecy.wa.gov*.

Double Check That Annual Report

Ecology employees who work with annual dangerous waste reports spend most of their time in the first quarter of the year answering phone calls and e-mails from people just like you, who have questions or have made errors on their reports.

Some errors can be caught by the *TurboWaste.Net* software, but a computer program can't catch everything. Errors like forgetting to code your waste as "non-recurrent" or mistakenly clicking the "mixed radioactive" button could still slip through. Staff run computer programs to look for this type of mistake once annual reports are submitted to the *TurboWaste.Net* database. This analysis usually results in phone calls to verify data or clear up questions such as: *Is the waste recurrent or non-recurrent? Are the waste amounts correct?*

The Legislature requires Ecology to periodically report on dangerous wastes in Washington. Mistakes in volume and recurrent status can significantly affect the total waste reported.

For more information on annual dangerous waste reports and how to avoid common errors, call (800) 874-2022 (in state) or (360) 407-6170 (out of state) or contact your nearest regional office (see back page).

Recycling Association Seeks Award Nominees

The Washington State Recycling Association is seeking nominations for their Recyclers of the Year, Recycling Innovation, K-12, Outstanding Public Education, and the Marilyn Skerbeck Recycling Advocate awards.

Nominations are due by March 1, 2005. The awards will be presented at the Association's annual banquet May 3, 2005 in Yakima. Detailed criteria and nomination forms are available on the Association's Web site at: *http://www.wsra.net* or by calling their office at (206) 244-0311.

2004 Tier Two Reports Due March 1

Businesses that store hazardous chemicals must report each year to state and local governments under Section 312, the Emergency Planning and Community Right-to-Know Act (EPCRA). Calendar year 2004 reports are due **March 1, 2005**.

Reporting requirements apply to the maximum amount of a chemical on-site ***at any one time*** during the previous calendar year.

EPCRA training is available from your Local Emergency Planning Committee (LEPC). For LEPC contact information visit the Community Right-to-Know Unit's Web site at: *http://www. ecy.wa.gov/epcra*

EPCRAMail, Washington's electronic Tier Two reporting application, is also available from the Web site as well as reporting requirements, instructions and forms. For regulatory assistance with SARA Title III or the Emergency Planning & Community Right-to-Know Act, call (800) 633-7585 or call (360) 407-6893.

Presidential Green Chemistry Challenge Awards

The Environmental Protection Agency recognizes innovative chemical technologies that incorporate green chemistry into the design, manufacture and use of chemicals. Green chemistry strives to develop alternate ways to synthesize industrial chemicals to reduce or prevent environmental pollutants.

Each nominated technology must have reached a significant milestone within the past five years in the United States.

The awards will be presented at the National Academy of Sciences in Washington, D.C. on June 20, 2005. For more information about green chemistry go to: *http://www.epa.gov/greenchemistry/*.

Governor's Award for 2004 And the Winners Are...

Seven facilities won the 2004 Governor's Award for Pollution Prevention and Sustainable Practices. Each facility provides services and makes products in ways that reduce the use of hazardous substances while conserving Washington's resources, such as energy and water.

The honor also recognizes their use of sustainable business practices that support the vitality of the economy, the environment and the community.

The 2004 winners include:

- **BetterBricks Daylighting Lab**, managed by the University of Washington's School of Architecture in Seattle, for providing free design services that improve energy conservation.
- **Columbia Plateau Producers** in Reardan, for practicing farming that is more sustainable and conserving energy, water and soil while producing the first dry-land eco-friendly product, Shepherd's Grain™ wheat.
- **Corry's Fine Dry Cleaning** of Mercer Island, for eliminating the use of a significant toxic chemical and providing a new, non-toxic cleaning option for customers.
- **Fairchild Air Force Base** near Spokane won the *Continuing Excellence* award for switching to renewable energy sources, conserving energy and water, and reducing waste.
- **Granum Inc.** (Choice Organic Tea) of Seattle, for manufacturing organic products, conserving resources and contributing to the quality of life in communities growing the crops.
- **Seattle University**, for maintaining the campus organically, composting food waste, conserving energy and water, and building according to environmental standards.
- **University of Washington Motor Pool**, for conserving energy and resources, recycling and using recycled products, and increasing the use of energy-efficient, low-polluting vehicles.

Fred Fleming (left) and Karl Kupers (right), of Columbia Plateau Producers, receive the Governor's Award from Tom Fitzsimmons, Chief of Staff to Governor Locke. The company uses no-till farming and other sustainable practices to produce grain and seed.

TurboWaste.Net Has a New Look

TurboWaste.Net is an on-line application generators can use to submit Dangerous Waste Annual Reports to Ecology. The first version came out last year and since then Ecology staff have simplified the processes to sign in, organize accounts, import and export data, and submit data to the agency.

Navigating the application is easier with "wizards" that take you where you need to go at the click of a button. The Site ID and other reporting forms remain the same.

As before, you can use the program to manage your waste and shipment information year-round before submitting it by the March 1 report deadline.

This new version is available for the 2004 Annual Reporting cycle.

Ecology staff will soon be holding one-on-one training sessions at the regional offices. For more information about training on the new version of *TurboWaste.Net*, go to the Web site at: ***https://www.ecy.wa.gov/programs/hwtr/waste-report/index.html*** or call (800) 874-2022 (in state) or (360) 407-6170 (out of state).

TREE Team Wins MVPP

Ecology's TREE team has earned a Most Valuable Pollution Prevention award from the National Pollution Prevention Roundtable. The Technical Resources for Engineering Efficiency (TREE) team was recognized for its technical assistance to Washington businesses to improve process efficiency while reducing wastes.

The TREE team provides free, in-depth technical assistance to businesses in: solid waste, hazardous waste, water quality, water resources, spills, and toxic cleanup. It typically works with three to five companies each year, providing in-depth analysis and advice.

Since its inception in 1998, the team has made suggestions that could save the companies a total of $1,080,000, reduce hazardous waste generation by 229,000 pounds, and reduce water use by 161 million gallons each year. (See *What is the TREE team?* in *Shoptalk*, Vol. 11, No. 1, #01-04-001.)

For more information, go to ***http://www.ecy.wa.gov/programs/hwtr/TREE/INDEX.html***

Questions and Answers

Q What should I do with used toner cartridges from my laser printer?

A Used toner and toner cartridges may designate as dangerous waste depending on the formulation of the toner. Whether or not the toner is dangerous, the best management option is to use up the toner and have the cartridges remanufactured.

Laser-printer toner cartridges contain two to three pounds of plastic and metal. These materials are still usable after the toner powder runs out.

Past "remanufacturing" of cartridges gave unreliable results since it consisted of just drilling holes in the unit, pouring in new toner, and sealing the holes. Now remanufacturers completely disassemble, repair, and reconstruct the cartridge, with new toner and parts as needed. For facilities that will take used cartridges see Ecology's on-line hazardous waste service directory at *http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm*

Q Is the leftover toner a dangerous waste? Do I count it as such?

A Material Safety Data Sheets of the most common and widely used toners indicate that they do not designate as dangerous waste, although other toxicity information is inconclusive. If the cartridge is sent off-site for remanufacturing, then it will not be regulated as dangerous waste. Also, any toner left in the cartridge is still considered product when sent back to the remanufacturer.

Cartridges that are not sent for remanufacturing and are instead being disposed of must go through the designation process. Since there is no conclusive toxicity data on toner, the toner left in discarded cartridges might designate as dangerous waste. In that case you would count it.

For assistance with waste designation questions, call a hazardous waste specialist at your nearest Ecology regional office.

Department of Ecology

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: (425) 649-7000
Lacey: (360) 407-6300
Yakima: (509) 575-2490
Spokane: (509) 329-3400

If you need this information in an alternate format, please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.

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