



Shoptalk

A newsletter about dangerous waste and pollution prevention

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To make reading easier, complete link addresses included within the articles are listed on the last page.

Inside:

Treatment by Generator Changes SQG Status, by Robert Rieck, Department of Ecology

3

Ecology recently revised the Treatment by Generator guidance to clarify that small quantity generators (SQGs) must follow the same dangerous waste regulations as medium and large quantity generators when treating dangerous wastes on their site.

New Software for Pollution Prevention Planning – TurboPlan!, by Mariann Cook Andrews, Department of Ecology

5

Ecology has a new online reporting software for pollution prevention planners. Welcome to TurboPlan!

Training in Dangerous Waste Management, by Mariann Cook Andrews, Department of Ecology

6

Anyone in Washington State who works with dangerous waste for a medium or large quantity generator must be trained in how to perform their job using proper dangerous waste management procedures.

Department of Ecology

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

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

To ask about available formats for the visually impaired please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Shoptalk is produced by the Washington State Department of Ecology's Hazardous Waste and Toxics Reduction Program.

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Crushing Used Fluorescent Lamps – Ecology Recommends Recycling Instead , by Rachel Best and Robert Rieck, Department of Ecology

7

Ecology does not consider lamp crushing a recycling activity because the crushing process reclaims nothing. This article is reprinted by permission from the Interagency Resource for Achieving Cooperation newsletter.

Commerce Certifying Lead-based Paint Removal Contractors, by Jim Pearson, Department of Ecology

9

The Washington State Department of Commerce is now certifying contractors for lead-based paint abatement.

Ecology at Biz Fair 2011

10

Look for the Ecology table at the 15th annual Washington Small Business fair in Renton, Washington on Saturday, September 24th 2011.

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Treatment by Generator Changes SQG Status

Ecology recently revised the guidance *Treatment by Generator* (Pub. 96-412) to clarify that small quantity generators (SQGs) must follow the same dangerous waste regulations as medium and large quantity generators when treating dangerous wastes on their site.

SQGs are “conditionally exempt” from many of the rules as long as they properly manage and dispose of their waste. But if they choose to treat their dangerous waste on-site, then they lose that exemption from the more stringent rules. See *Guidance for Small Quantity Generators*, for the description of a conditionally exempt small quantity generator.



Many Washington State generators choose to treat their dangerous waste on-site in containers or tanks. This is called “treatment by generator” (TBG). Treatment includes almost any type of physical or chemical processing to make a waste less dangerous, or easier and safer to transport. For example, generators often solidify wastes before disposing in a landfill.

Generators doing TBG do not need a dangerous waste treatment permit, but they must follow the TBG rules. *Treatment by Generator* explains the requirements and lists the six most commonly accepted treatment methods. These are:

- carbon adsorption
- evaporation
- filtration
- separation/distillation
- elementary neutralization
- solidification/stabilization

A generator can use a treatment method other than these six, but should check first with Ecology to make sure it meets the regulations.

Processes involving recycling and reclamation, such as solvent distillation, are not TBG.

Why did Ecology revise the TBG guidance?

Ecology changed the guidance to clarify what types of generators can perform on-site waste treatment. Ecology’s guidance previously stated that the treatment by generator rules did not apply to small quantity generators. Although the TBG rules didn’t apply, the guidance recommended that SQGs doing on-site treatment follow the performance and safety standards.

The revised guidance now expressly states that Conditionally Exempt Small Quantity Generators cannot do treatment by generator. Ecology’s reasons for this shift in policy include:

- Federal EPA hazardous waste regulations do not have an allowance for SQGs to perform TBG. Ecology’s rules must be equivalent to the federal requirements to maintain authorization for its hazardous waste program.

- SQGs that treated their waste were not subject to the regulations that ensure safe waste treatment. For example:
 - Most SQGs are not equipped nor have the trained staff to carry out dangerous waste treatment safely.
 - SQGs are not required to conduct general inspections or inspections of their dangerous waste accumulation areas.
 - SQGs do not have specific requirements for preparedness and prevention.
 - SQGs do not have specific requirements for contingency planning and emergency procedures.
 - SQGs do not have an accumulation time limit.
 - An SQG could potentially treat a single batch of large quantities of waste accumulated over a long time. It is an environmental risk to treat large quantities of waste without regulatory requirements.
- SQGs doing waste treatment did not have to obtain RCRA Identification numbers and file annual reports of their TBG activity. Ecology had no means of tracking this activity to ensure SQGs were doing it in a manner that protected the environment.

For more information, consult with the hazardous waste compliance specialists at your local Ecology office.

New for Pollution Prevention Planning - TurboPlan!

Pollution Prevention Planners will find their reporting easier using TurboPlan, Ecology's new online reporting software. According to Tom Boucher, P2 Planning lead, the new software addresses many problems planners had with the old document.

TurboPlan's advantages:

- Stable and modern web-based system.
- Provides more extensive help and feedback to make it easier to understand and fill out.
- Eliminates duplication of effort; it reuses information you already entered in TurboWaste.
- Easier to fix bugs and add enhancements.
- Will show trends visually in hazardous waste generation and materials use.

Ecology will notify planners to use TurboPlan beginning in early 2012, to report their actions for the 2011 reporting year. The system will have previous data already loaded.

Ecology will not maintain the current reporting form after approving the 2010 Pollution Prevention Plans. Those plans are due September 1, 2011. TurboPlan will be available for testing, review, and comments starting November 2011.

For more information on Pollution Prevention Planning using TurboPlan, consult with the Toxics Reduction specialists at your local Ecology office or contact Tom Boucher, or Ed Bentley.



Training in Dangerous Waste Management

Anyone in Washington State who works with dangerous waste for a medium or large quantity generator must be trained in how to perform their job using proper dangerous waste management procedures. This includes being able to respond effectively to emergencies.

Employers are responsible for training their employees. The training must teach the workers to perform their duties in a way that ensures the facility complies with the state's Dangerous Waste Regulations. Workers must be supervised until they have been trained initially, and they must review the training at least annually.



Proper training can prevent pollution and keep workers safe.

Large quantity generators must complete written dangerous waste personnel training plans. See *How to Prepare a Written Personnel Training Plan and Sample Training Plan* for examples on ways to do this. Medium quantity generators do not have to have a written plan, but they must make sure they train all their workers.

The key is that the training must be specific to the workers, what they do, and where they do it. Front-office staff may just need training in emergency procedures, while shop workers may need training in how to move and store dangerous waste. Supervisors may need training in the tracking paperwork for disposing of the waste.

The Hazardous Waste and Toxics Reduction Program's website has a set of self-guiding tutorials addressing the basics of dangerous waste management. They also cover the differences between the state and federal requirements. Washington's Dangerous Waste Regulations follow the federal Resource Conservation and Recovery Act (RCRA). But in some cases, such as designating for toxicity, the state's requirements are more stringent.

There are national and local training companies that specialize in dangerous waste management training, primarily RCRA. You can find some of those on the Department of Ecology's Hazardous Waste Services Directory. Search under "Training (DOT, Transport, Safety, etc.)"

If you are unsure what training you should provide your employees, consult with the dangerous waste compliance specialists at your local Ecology office.

Crushing Used Fluorescent Lamps

Ecology Recommends Recycling Instead

Drum-top lamp crusher, with mercury vapor capture on the side. Light tubes are fed into it to be crushed by a spinning blade. The vacuum motor and filtering system collect mercury vapor and particulate.

Management of burnt out fluorescent lamps and tubes can be a headache. Some businesses use drum top crushers (DTC) to crush their lamps. A DTC unit fits on top of a 55-gallon drum. You feed the light tubes into it, where a spinning wheel crushes them. A vacuum motor and filter system collect mercury vapor and particulate.

While this reduces the volume of waste, Ecology does not recommend use of DTCs because of concerns with mercury releases and potential harm to employee and public health. Instead, Ecology strongly encourages dangerous waste lamp generators to manage their lamps intact, following the simplified universal waste rules.

Many fluorescent lamps designate as dangerous waste because they contain mercury. Ecology adopted the universal waste rule for fluorescent lamps as an easier management method over typical dangerous waste requirements*. Universal waste rules don't allow handlers to treat wastes. Ecology views intentional lamp crushing as a type of waste treatment. It is not recycling, because the crushing process does not reclaim anything.

One advantage of the universal waste rules is that anyone can be a handler of universal waste and collect from other handlers. In rural areas where lamp-recycling options are limited, a business easily could collect lamps from nearby businesses in quantities large enough for economical transport by a fluorescent lamp recycler. This is not allowed for crushed lamps.

Ecology has recently published guidance on the rules that apply to use of DTC equipment. (See Focus on Fluorescent Lamp Management - Using Fluorescent Lamp Crushing Equipment, Pub. 11-04-009.) Generators of spent lamps can crush them with a DTC by following the Treatment-by-Generator requirements. The guidance on fluorescent lamp crushing highlights the rules applying to generators using DTC units. The main points to consider include:

- Only crush lamps generated on-site, not lamps received or taken from other sites or businesses.
- Manage the glass debris as a dangerous waste, unless testing shows it does not designate. Remove dangerous waste crushed glass debris and filters off-site within 90 days for Large Quantity Generators or 180 days for Medium Quantity Generators.



Drum-top lamp crusher, with mercury vapor capture on the side. Light tubes are fed into it to be crushed by a spinning blade. The vacuum motor and filtering system collect mercury vapor and particulate.

- For determining generator status and annual report purposes, count lamps prior to crushing and all dangerous waste glass debris and filters generated after crushing.
- Regularly monitor the air to ensure mercury is not escaping from the unit.
- Maintain a log of crushing activity and follow waste accumulation rules.
- Use a dangerous waste manifest to ship drums of glass debris and filters to a facility permitted to take it.
- The dangerous waste regulations do not allow Small Quantity Generators to treat their waste on-site. Lamp crushing is not an option for SQGs.

Remember, you cannot take lamps from customer locations or affiliated businesses and crush them at your shop. Facilities able to take and crush dangerous wastes lamps include:

- Permitted treatment, storage, and disposal facilities
- Dangerous waste recycling facilities not required to have a dangerous waste permit (because they do not store wastes)
- Universal waste destination facilities
- Moderate risk waste facilities that take household hazardous waste and small quantity generator waste

Ecology encourages recycling fluorescent lamps. In fact, starting January 2013, a new state law will require that they be recycled. A 2006 EPA study showed that all of the DTC models tested released mercury. In actual practice, the amount of mercury released depends on several factors, including type of equipment and adequacy of installation, maintenance, and operation. Over time, seals can fail or expensive filters may not be replaced. Given that mercury is highly toxic and its vapors are invisible, monitoring and controlling these releases is a problem.

*Refer to WAC 173-303-573 for more information on the universal waste rule.

Commerce Certifying Lead-based Paint Removal Contractors

Contractors disturbing lead-based paint must be certified and employ "lead safe practices." The Washington State Department of Commerce (Commerce) is now certifying contractors for lead-based paint abatement work. The U.S. Environmental Protection Agency (EPA) turned over the certification program to the state March 16, 2011.

EPA adopted the Lead Renovation, Repair, and Painting Program rule in 2008. It applies to contractors involved in work that may disturb lead-based paint in homes, childcare facilities, and schools built before 1978.

The rule requires contractors to use "lead safe practices" and take other actions to prevent lead poisoning. The rule also required contracting firms to be certified by October 1, 2010 and employees to be trained by December 31, 2010. (See the Fall 2010 Shoptalk for a related article.)



Contractors disturbing lead-based paint must be certified and employ "lead safe practices."

So what's new?

EPA can authorize states, tribes, and territories to administer their own program, which operate in place of the EPA regulations. The Department of Commerce now runs the Lead Renovation, Repair, and Paint program in Washington. That means that contractors here must follow Washington State's regulations instead of the federal regulations. It also means Commerce is responsible for making sure contractors are properly certified and they meet the law's requirements.

How does this rule relate to managing lead-based paint waste?

The Department of Commerce's program does not cover how to manage lead-based paint wastes. The Department of Ecology's dangerous waste regulations do that. Contractors must determine if wastes from child-care facilities, schools, and other non-household work are dangerous waste. If the lead-based paint wastes are dangerous waste, the actual disposal requirements depend on the generator status of the business or school.

Lead paint wastes generated from households, whether by the homeowner or a contractor, are exempt from dangerous waste regulation. Ecology recommends that this exempt, but still potentially harmful, waste be managed using best management practices. Collect (but do not vacuum) the paint chips, double bag them, and dispose of them at your local household hazardous waste (HHW) facility. If disposal to the HHW facility is not available, you can put the double-bagged paint chips in the trash.

Where to find more information

For more information on Commerce's program, see their Lead-Based Paint, Home Repair and Rehab and Weatherization website. It has links to background information, rules, applying for certification, lead training providers, firms that are already certified, and more. You can also call the Lead Line at 360-586-LEAD (5323).

For more information on disposing of lead-based paint wastes, consult with the hazardous waste compliance specialists at your local Ecology office. You can also find more information about the regulation of wastes from building renovation on the Demolition Debris page.



Ecology at Biz Fair 2011

Look for the Ecology table at the 15th annual Washington Small Business Fair in Renton, Washington on Saturday, September 24. The free “BizFair” is a place to learn from the experts how to form and run a successful business. Ecology will be there to help you with environmental protection topics important to any businesses – dangerous waste, stormwater pollution, and others.

Sharpen your skills at the seminars on up-to-date topics for all stages of business ownership. Savvy business experts will share their knowledge and real-life experiences. Connect with 30 federal, state, and local government agencies, and business and trade associations. The fair is free, with plenty of free parking and no advance registration.

BizFair runs from 8:00 a.m. to 3:30 p.m. at Renton Technical College, 3000 NE 4th Street.

Links to Resources Mentioned in this Issue

Treatment by Generator Changes SQG Status

- Treatment by Generator, Ecology publication 96-412: <http://www.ecy.wa.gov/biblio/96412.html>
 - Dangerous Waste Regulations, WAC 173-303: <http://www.ecy.wa.gov/biblio/wac173303.html>
 - Guidance for Small Quantity Generators: http://www.ecy.wa.gov/programs/hwtr/reg_comp_guide/pages/regs_sqg.html
 - RCRA Identification Numbers: <http://www.ecy.wa.gov/programs/hwtr/waste-report/notification.html>
 - Local Ecology Offices: <http://www.ecy.wa.gov/org.html>
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Training in Dangerous Waste Management

- WAC 173-303-335 Personnel Training: <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-330>
 - Dangerous Waste Regulations, WAC 173-303: <http://www.ecy.wa.gov/biblio/wac173303.html>
 - How to Prepare a Written Personnel Training Plan: http://www.ecy.wa.gov/programs/hwtr/reg_comp_guide/pages/training_plan.pdf
 - Sample Training Plan: http://www.ecy.wa.gov/programs/hwtr/reg_comp_guide/pages/sample_training_plan.pdf
 - Hazardous Waste and Toxics Reduction Program: <http://www.ecy.wa.gov/programs/hwtr/index.html>
 - Self-guiding tutorials: <http://www.ecy.wa.gov/programs/hwtr/workshops/index.html>
 - Resource Conservation and Recovery Act (RCRA): <http://www.epa.gov/lawsregs/laws/rcra.html>
 - Hazardous Waste Services Directory: <http://apps.ecy.wa.gov/hwsd/>
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Crushing Used Fluorescent Lamps – Ecology Recommends Recycling Instead

- Using Fluorescent Lamp Crushing Equipment, Ecology publication 11-04-009: <http://www.ecy.wa.gov/biblio/1104009.html>
 - Treatment by Generator, Ecology publication 96-412: <http://www.ecy.wa.gov/biblio/96412.html>
 - 2006 EPA Study: <http://www.epa.gov/osw/hazard/wastetypes/universal/lamps/lamp-recycling2-09.pdf>
 - WAC 173-303-573: <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-573>
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Commerce Certifying Lead-based Paint Removal Contractors

- Lead Renovation, Repair, and Painting Program: <http://www.epa.gov/lead/pubs/renovation.htm>
 - Fall 2010 Shoptalk article, Ecology publication 10-04-003: <http://www.ecy.wa.gov/biblio/1004003.html>
 - Lead-based Paint, Home Repair and Rehab, and Weatherization website: <http://www.commerce.wa.gov/site/1066/default.aspx>
 - Demolition Debris website: <http://www.ecy.wa.gov/programs/hwtr/demodebris/index.html>
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Ecology at Biz Fair 2011

- Schedule and seminars: <http://www.bizfair.org/schedule.htm>
- Biz Fair Organization: <http://www.bizfair.org/>
- Biz Fair on Facebook: <http://www.facebook.com/bizfair>