

Sign Builders Set an Example to Recycle

Sign shops are establishing methods for appropriate mercury disposal.

Sign makers who use fluorescent lights or neon tubes have a role in reducing mercury in our environment. As our knowledge of the environmental and health threats posed by mercury has grown, so too have the regulations put in place to protect us from mercury exposure.

All six states in New England forbid the disposal of any lamp containing mercury. Sign builders must now incorporate new recycling procedures into their operations to ensure proper management. Although the rules (available through state environmental agencies) can seem burdensome, some sign shops have successfully incorporated recycling into their operations by adopting new procedures that work for them.

For example, Keith Norton of Casco Sign, a large neon sign repair/build shop in Lawrence, Massachusetts, wanted to establish a recycling program for his shop. Norton works with many types of neon signs and generates a variety of shapes and sizes of neon tube waste. He started by contacting Veolia Environmental Services (www.veoliaes.com), a mercury recycling company in Stoughton, Massachusetts, and found that Plant Manager Paul Conca was willing to visit his shop.

Norton and Conca figured out a plan to accommodate the different types of mercury waste materials and containers. Norton now keeps under his workbench a five-gallon pail lined with a heavy plastic bag where he puts

smaller spent electrodes (*see photo*). Norton has a taller fiber drum (a heavy cardboard container with cardboard lid)—also lined with a heavy plastic bag—that can hold tubing up to three feet long; he received approval from the Massachusetts Department of Environmental Protection (MassDEP) to cut tubing, if necessary, to fit it in the drum.

Norton keeps these containers closed when he isn't using them (to minimize mercury vapor emission). When a bag is full, he ties it up and places it in a large, white, molded plastic, pallet-sized box that can be moved around

with a forklift (*see photos on page 8*). Weather stripping was added to the lid's seal to minimize emission of mercury vapors that will pass through the plastic bag.

All in all, Norton says the system works for him, meets compliance

requirements, and prevents harmful releases of mercury into his workplace and the environment.

Another sign maker, Renney Bonner of Wass Arthur Signs in Fitchburg, Massachusetts, also set up an in-store recycling program for lamps from the neon and fluorescent back-lighted signs they make and sell. He has three cylindrical fiber drums (three, four, and eight feet tall) that are lined with plastic bags to accommodate the neon lamps and the four- and eight-foot long fluorescent tubes. He hired Northeast Lamp Recycling (www.nrlamp.com) of East



Windsor, Connecticut, to collect his full drums and drop off empties. Renney reports that about one in five of his customers complained about his new recycling charge for taking down a sign, but upon informing them of the reasons for this charge, nobody has refused to pay it.

State and Federal Laws

We've learned that mercury is toxic to the human nervous system, kidneys, liver, and immune system and that (inhaled or ingested) mercury can cause a range of physical symptoms. Because even low levels of mercury released by broken lamps, thermometers, and other mercury products can lead to problems, regulations have been changing to address these dangers.

Mercury disposal laws vary from state to state. Every state prohibits putting most mercury-containing products in the trash, but several states (including all six New England states, California, Minnesota, and New York) have explicitly banned disposal of *all* mercury-containing products in the trash, including "low-mercury" lamps. This means that, throughout New England, even fluorescent lights specially designed so they could be thrown in the trash under federal rules (and actively marketed that way by the lamp manufacturers) can't be disposed of with other lights. As a result, all businesses in New England have to recycle their mercury-containing lamps when they burn out.

Vermont is the only state to ban the *sale* of any mercury-containing neon lighting, while Connecticut and Rhode Island limit the sale based on the amount of mercury in the lights. Massachusetts now requires all manufacturers of any mercury-containing lighting products to let buyers know the lights being sold contain mercury and must be recycled at the end of their useful life.

Spent lamps, like certain other products that contain mercury, are considered a kind of hazardous waste called Universal Waste and must be handled in certain ways under government rules. Specifically, they must be:

- ☑ Stored in a way that minimizes breakage.
- ☑ Placed in containers labeled "Universal Waste" and indicate the type of material inside and the date something was first placed in the container.
- ☑ Delivered within one year of the date on the container to either a licensed mercury recycler or another facility that

generates the same waste and has a contract with a licensed recycler.

Since mercury lamps only emit mercury vapor when they break, active lamp recycling programs can reduce the likelihood of an accidental mercury release by stressing the importance of handling lamps carefully.

Setting Up a Recycling Program

So what's a sign maker supposed to do? It's really not that complicated to set up a recycling program:

- ☑ Assess the type and estimate the number of lamps you generate per month or per year both in sign-making and your own business lighting.
- ☑ Call several recycling companies to see what arrangements they offer. Establish a relationship with the recycler that offers you the arrangement that best suits your needs. Do they provide collection containers? What kind of containers? Are the pick-up costs included in the lamp recycling fee?
- ☑ Figure out where you can safely store the recycling container(s). Mark your container(s) "Universal Waste - Spent Mercury Lamps" and the date you

put your first spent lamp in the container.

Adoption of New Practices

Learning how to properly manage mercury-containing lighting products will take time. Government agencies such as MassDEP and the U.S. Environmental Protection Agency (EPA) can provide you with information and answer your questions about mercury lamp recycling requirements. Many state sign associations also help members understand and comply with the rules.

Eventually government agencies may begin inspecting your workplace to ensure you are doing things the right way, so it's a good idea to get educated about the requirements for handling mercury-containing wastes and to start a recycling program as soon as you can. Once you've incorporated recycling into your sign making operations, it will quickly become second nature. ☐

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