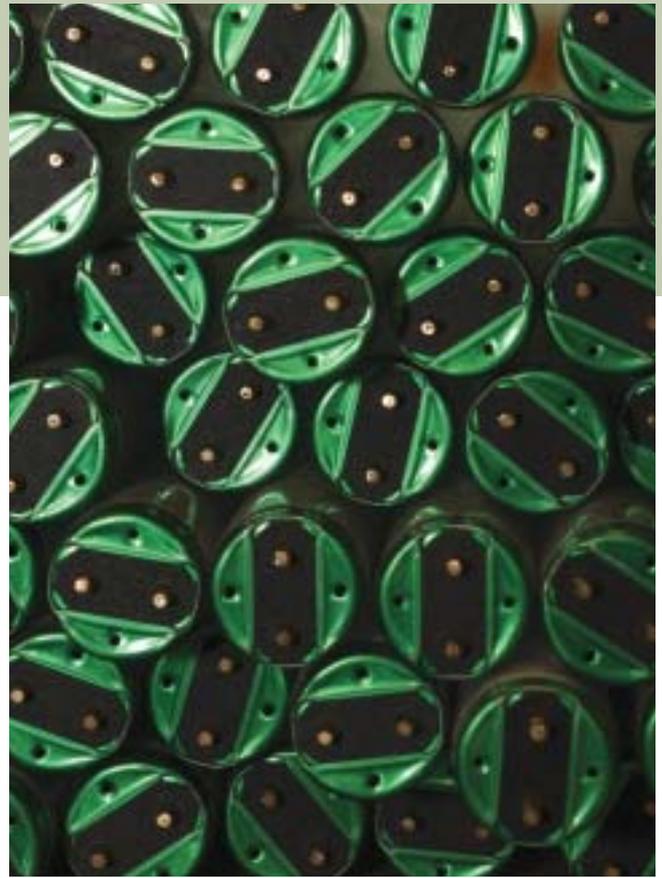


Wesco-Bangor's response to Maine's Universal Waste Rule provided a much-needed solution for area businesses and industry—and cultivated a whole new world of opportunity for the electrical distribution giant



GREEN

MACHINE

Story & Photos by Michael Defilippo

Bangor, Maine claims that it is the birthplace of the legendary lumberjack Paul Bunyan. The origin and existence of this giant are pure folklore. But Bangor is home to a giant in electrical distribution whose story is no tall tale.

The story of the Bangor branch of Wesco Distribution and its universal waste recycling program is a good yarn, and every word of it is true.

In January of 2001 the state of Maine adopted the Universal Waste Rule. Universal waste is non-hazardous waste that is still a potential threat to the environment when placed in a sanitary landfill. The law stipulated that any mercury-containing device—fluorescent lamps, computer screens, thermometers, etc.—that did not pass a low mercury

standard must be recycled. Jim Baines, account representative for Wesco's Bangor branch, felt that this law would provide a boost to his business because Wesco is Maine's largest distributor of the Philips Alto line of lamps, the only lamp that meets this strict criteria.

However, after a number of tests and meetings to determine the mercury content of various brand bulbs, the state decided that beginning July 15, 2002, all mercury-containing products must be recycled, regardless of the concentration of mercury.

This decision created a problem for business and industry without providing a solution. In fact, buildings that were under the state's management—office buildings and schools—had no recycling plan for their own universal





Above: Jim Baines holds a Phillips Alto tube, a low mercury bulb for which sales have skyrocketed since the state of Maine adopted the Universal Waste Rule. *Below:* Rick Pelkey and Jim Baines check in lamps in a room designated for storage of universal waste. Once the branch's entire staff became certified in universal waste handling, the whole facility was designated as a storage site.

waste, so by July 1 the state faced the embarrassing possibility of being in violation of its own law.

Baines became obsessed with the issue. He knew that this rule could adversely impact his customers' businesses. "The closest recycling plant for universal waste is four hours away in Stoughton, Mass.," said Baines.

An idea takes root

Baines knew that it was not cost-effective for the Stoughton recycling company to make a four-hour one-way trip to Bangor to pick up anything less than a massive amount of recyclables. He also knew that the businesses further upstate would find it virtually impossible to recycle their universal waste.



"I told the Department of Environmental Protection [DEP] that the biggest problem we have in Maine is the logistics of transporting the spent lamps from upstate Maine to Massachusetts," he said. "Aside from that, the storage requirements stipulate that a facility must be approved by the state in order to store the waste."

So Baines turned the sales

and delivery cycle on its head. He concocted a plan that positioned his branch as a universal waste pick-up and consolidation facility, reasoning that the trucks that deliver products to customers could also be used to pick up their universal waste.

Baines immersed himself in the subject for about two years. He attended meetings and learned everything his company needed to do in order to receive certification as a universal waste consolidation facility. He became certified as a trainer in universal waste procedures and trained everyone on staff at the Bangor branch, and now the entire place is classified as a consolidation facility. This is a critical element of the program's success—rather than having to create an isolated and locked storage area for universal waste, it can sit in the receiving area until the recycler picks it up.

In addition, because the state requires that all handlers of universal waste must have a clean-up kit, and the only kit available could not adequately clean up a broken 4' fluorescent tube, Baines developed one. Today, Wesco-Bangor sells them to all of its customers.

All of the waste products it collects and stores—mercury-bearing lamps, lamp ballasts, batteries, PCB waste, mercury wastes, and computer and electronic equipment—are assessed a fee by Wesco. Part of that fee covers the transportation costs associated with the waste hauling, but most of it covers the increased labor of waste handling.

"There are about seven people at this branch who are

directly involved in the recycling program,” said Wesco-Bangor’s Branch Manager Paul Perry. “Everything that goes out of here is on an eight-part universal bill of lading. Copies stay here, go to the waste generator, to the state DEP, and to the recycling facility in Massachusetts. The only way to make it all work is to keep the paperwork flowing smoothly.”

Perry’s initial reaction to the idea of designating the branch as a universal waste consolidation facility was not a positive one. He had to ensure that the recycling program would conform to the company’s computer system for accounts payable and receivable, as well as inventory.

“This is different from buying a light bulb from a manufacturer, storing it in the warehouse, and selling it. At first I thought the whole thing was a nuisance, but then Jim proved to me how much of an opportunity it was,” Perry recalled. “Our industrial accounts were required to recycle, and they wanted information from us. Jim latched on to the idea, and it has taken off.”

Seeing green

The recycling legislation emerged at the same time as an industrial downturn in Maine. Wesco-Bangor sought a way to boost business, but never imagined that this environmental regulation would be so beneficial.

Baines now meets with environmental as well as purchasing directors at industrial accounts to tell them about his program. “The environmental people are extremely interested in reducing mercury at their facility,” said Baines. “It helps when I present them with the lowest mercury product available—the Philips Alto. Then I can tell the purchasing agent that we will provide them with a product that is superior to what they are using for the same—or even lower—cost.”

Dianne Taylor, the industrial and commercial sales representative for Philips in Maine and New Hampshire, is impressed by the results of this program.

“It is rare for a distributor to diversify and take charge of an opportunity. Not everybody is able to shift gears that quickly and adapt to the situation like they have done at Wesco-Bangor,” said Taylor. “It has actually impacted my sales of the Alto line and Philips in general. There had been some accounts that had been hard for us to penetrate, but the combination of Philips, Wesco, and the recycling program put us over the edge, and we ended up getting the business.”

Mills and large industrial facilities are not the only businesses affected by this recycling mandate, as it applies to every business that handles mercury-containing products. The Wesco branches in Bangor, Portland, and Rockland are currently the only three locations in Maine certified as universal waste consolidation facilities. This has led to a flood of inquiries from frantic business owners desperate for help with their new recycling problem.

“We have been receiving an average of 15 to 20 calls each day from a variety of business owners concerned about their universal waste,” noted Baines. “And the state DEP has referred a number of people to us.”

Bangor Savings Bank has 60 locations in Maine. Not a Wesco customer until the Universal Waste Rule was



Above: Receiving Manager Rick Pelkey attaches a label to the recycling containers in the warehouse. **Below:** Universal waste packed and ready for shipping waits in the Wesco warehouse.

implemented, the company has since signed a contract for Wesco to supply and pick up all of its lamps. Key people at the bank were also trained on mercury procedures by Baines, and he has signed on many major hospitals and universities in the area to his program.

The International Paper mill in Bucksport is the largest customer participating in this program. It not only ships spent lamps to Wesco, it also sends the distributor all of its universal waste—computer equipment, batteries, and other non-hazardous products designated by the state.

“I trained all of its people, set up the recycling area, and supplied storage and shipping containers,” said Baines. “Our truck is there every day. We take the containers, handle the paperwork, and store it on our site for pickup by the recycling company.”

The Rockland branch is one of the other Wesco branches



in Maine currently operating as a universal waste consolidation facility. Account Representative Todd DeRaps is the point person at that branch.

"This is very exciting," said DeRaps. "We are providing our customers a valuable service, rather than just asking for a wire nut order."

Although it is unnecessary (remember, the entire facility has been classified as a consolidation facility), the warehouse at the Bangor branch does have a room dedicated for the storage of universal waste. The receiving area has large cylindrical corrugated tubes and square boxes stacked like building blocks, awaiting the weekly pickup by the recycling plant. Receiving Manager Rick Pelkey's workload

has increased since the company entered the recycling business, but he thinks it is worth it. His concerns are not only financial, but also environmental.

"There is a lot of mercury out there," said Pelkey. "If we can do our part to take care of it, that will be great. I grew up on the water. We used to catch tons of fish and eat them. I like to take my four-year-old son out fishing, but they say children under eight should not eat the fish because of high mercury concentrations. We are working to change that." ◆

Michael Defilippo is a contributing editor based in St. Louis. Visit his Web site at www.michaeldefilippo.com.

A look at lamp disposal

WHAT'S ALL THE FUSS ABOUT?

Story by Jeff Fitch



Each year nearly 600 million lamps are dumped into landfills and solid waste incinerators across the nation. Energy-efficient fluorescent lamps containing mercury make up the largest number of lamps trashed. With new EPA Universal Waste laws (in place since January 2000), businesses are required to manage used lamps properly through licensed hazardous waste disposal companies. Unfortunately, it's not uncommon to see anywhere from one to dozens of fluorescent tubes tossed in with regular trash at commercial waste dumpsters.

Mercury vapor may escape into the air when lamps are broken. Serious environmental consequences occur when the mercury seeps into the earth and settles into ground and surface waters. Health hazards exist to people who become exposed to mercury vapor, as it is extremely toxic to the human nervous system. It's also notoriously persistent and builds up in fish and birds. Lead, which is also found in used lamps, causes severe environmental damage and is known to lower IQ levels in children who are exposed.

Rules from the EPA established how businesses are to dispose of mercury-containing devices, which are considered

a "universal waste." Many have ignored these rules. But the issues of adequate compliance will be tested as disgruntled employees or environmental activists turn in companies. Enforcement of the recycling laws are becoming ever more present, and penalties for non-compliance can be stiff.

Recommendations for managing the mercury hazard in fluorescent lamps and HID lamps include:

- 1 Do not crush or break the lamps.
- 2 Store lamps in a manner that will prevent them from breaking. Ideally, package unbroken used lamps in boxes. Original packaging may meet these requirements and "Used Lamp Disposal Boxes" are available. (These DOT containers are designed and are identified for the purpose of used lamp disposal and recycling.)
- 3 Do not tape lamps together, as this poses a danger of breakage by implosion, and creates additional handling and processing costs.
- 4 Store broken lamps in a non-metal closed container marked "Broken Mercury-Containing Lamps." Broken lamps may be sent to a permitted recycling facility or managed to a licensed hazardous waste facility as "hazardous waste," according to federal/state hazardous waste requirements. Toxic

characteristic leaching procedure (TCLP) testing is the only approved method by the EPA to determine if the broken lamps are hazardous. (Assessments determine that they are hazardous 98% of the time, according to Atlantic-Inland, a Wayne, Pennsylvania-based environmental management services and consulting company.)

⑤ Ship the lamps to a permitted TSD site for recycling.

When lamps are collected for recycling, component parts are separated and hazardous materials handled properly to avoid any environmental contamination. The crushed lamp material is separated into five waste paths: Aluminum end caps, brass, glass, mercury-rich phosphor powder, and bake-o-lite insulation.

Mercury reclamation facilities retort the lamps. This retort process occurs when the entire crushed lamp and components are heated under high temperature and vacuum, the mercury is vaporized, condensed, and extracted from the powders, glass, and metal components; 99.9% of the mercury is recovered and reused. Not all lamp retorting facilities retort the whole lamp. Some facilities processes differ, so they only retort portions of the lamps. And while this practice may reduce the cost of disposal, it truly reflects “higher liability risk” for the lamp generator. The owner of the lamps has cradle-to-grave responsibility for all regulated wastes.

According to Atlantic-Inland, lamp waste causes more mercury contamination of the environment than any other consumer product.

As a solution for recycling mercury-containing devices and other contaminated electrical equipment, the company distributes a recycling kit that allows fluorescent lamps to be collected on-site and shipped, in a FedEx pre-paid carton, directly to an EPA-approved hazardous waste recycling center. Each kit holds 36 lamps and costs about \$55, which includes the shipping and recycling costs.

Offering a recycling option to customers can be a good “value-add” service for distributors. Many industries already charge consumers for the recycling of materials or hazardous waste collection—take the tire industry, for example. When new tires are purchased from a tire distributor, a disposal fee of anywhere from \$1 to \$3 per tire is paid for the old tires. Even hospitals are adding a hazardous medical waste fee to patients using their facilities.

As these environmental laws become enforced and violators are prosecuted, industries are looking for a solution to their lamp recycling needs. The electrical distributor should always ask for the recycling order with the lamp business. ♦

Jeff Fitch is president of Atlantic-Inland Environmental Services. For more information on the company's Environmental & Compliance Services Program or to obtain a fluorescent lamp recycling kit, contact him at 877-392-9445, ext. 18 or e-mail jfitch@atlanticinland.com. The company's Web site can be found at www.atlanticinland.com.