

Crushing CFL action not on the field

■ New machine safely disposes of compact fluorescent lightbulbs and extracts mercury vapours at the same time

By J.P. SQUIRE
The Daily Courier

The environmental push is on to switch from old-fashioned lightbulbs to energy-efficient fluorescent lighting.

However, that shift also causes a disposal and recycling challenge, since fluorescent tubes and the new compact fluorescent lightbulbs (CFLs) contain mercury.

One solution is being explored by the waste reduction office of the Central Okanagan Regional District.

In partnership with Fortis, the regional district plans to collect CFLs at Home Depot, Home Hardware and Rona starting in mid-October.

Planning is also underway to collect fluorescent tubes at recycling depots in July 2008, says Carol Suhan, waste reduction manager.

"Until two or three months ago, nobody asked. But with incandescent lights being banned, the interest in CFLs and people recognizing there is mercury vapour in these bulbs, it's become a concern, and we are getting people starting to ask about this."

She's learned there is less mercury in each bulb than there is in the average watch battery.

"It really is a small amount, but, that said, we don't want to be careless, to say it's not an issue at all, because it is," she said, noting the public can take household batteries to The Battery Doctors at 1972 Windsor Rd. (off Spall Road).

As of June, 1.8 tonnes of batteries had been collected, so the company is on track to collect up to four tonnes this year.

"They probably get around 80 to 90 customers per month dropping off batteries. They've usually accumulated three or four pounds at a time," said Suhan.

Meanwhile, Graham Ingram, facilities manager at Okanagan College, heard about the Premium Bulb Eater and ordered the Okanagan's first \$4,000 system from Air Cycle



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Okanagan College facility service worker Rick Montagnon feeds a fluorescent bulb into a special disposal unit on Monday. The Premium Bulb Eater safely traps mercury vapours from the bulbs.

Corp. (www.aircycle.com).

It not only crushes spent fluorescent tubes of any length into 100 per cent recyclable material, the machine captures more than 99.99 per cent of the vapours released, which include mercury, said Ingram.

"It has a three-stage vacuum system. The first collects the particulates from up to 1,350 four-foot fluorescent lamps. We change the filter twice in filling a 55-gallon drum," he said.

Since the campus has chemistry labs, full drums can be stored there and included with other hazardous wastes handled by an Alberta company.

"The glass is so fine that it's almost like sand.

It's added to asphalt for road surfaces," he said.

The three other campuses in Penticton, Vernon and Salmon Arm send their spent bulbs to Kelowna and receive new ones in return.

The Premium Bulb Eater also saves on storage space since it can hold the equivalent of 54 25-bulb boxes.

It's so small that it could be moved from location to location, and Kershaw has considered that in partnership with the Central Okanagan School District, which had a parallel investigation into different ways to safely dispose of tubes.

Fluorescent

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Instead, the school district and Interior Health may buy their own bulb eater. City staff from the water treatment plant have also checked it out because they use UV fluorescent tubes in their new UV water disinfection process.

The bulb eater came with a video explaining safe operation. Rick Montagnon, the principal operator, wears a particle mask and face shield, and the area is cordoned off while the bulbs seem like they are literally sucked into the machine in less than a second.

"We take recycling seriously," said Kershaw. "I'm sure there's even a safer alternative to where we are now. We're not there yet, but we're well on our way."

That solves Okanagan College's disposal problems, and the regional district is planning a new system for the public. However, what does a homeowner or business person do when one of the fluorescent lamps breaks and the mercury vapour escapes?

Not many people, including manufacturers' representatives, are aware that there are specific cleanup recommendations by Natural Resources Canada and the Environmental Protection Agency in the U.S.

Part 2 in Wednesday's edition of The Daily Courier will explore that challenge.

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