

## **Exposing the Fraud: Recycling Programs Gone Wrong**

By Tricia Judge, Int'l ITC

“Remember, what you toss always ends up somewhere.”

— From the Hewlett Packard website.

The debate of whether it is better to recycle or remanufacture toner cartridges has raged for years between printer manufacturers and the aftermarket. To the poor people of Guiyu, China, the answer is crystal clear.

Heaps of empty cartridges line the streets and riversides after being scavenged for their toner. Once the toner is swept out by fingers or paintbrushes, the plastic carcasses and other electronic refuse are burned — fouling the air — or discarded along the Lianjiang River. This type of dumping has rendered the area's drinking water not potable; the river has 200 times the acceptable levels of acid and 2,400 times acceptable levels of lead.

Many residents have developed respiratory problems. A local school survey found that 100 of the 1,000 students have severe asthma or other respiratory afflictions.

The residents here have to choose between utter poverty and pollution levels akin to poisoning. The net gain for the average laborer? Roughly \$1.50 per day.

Guiyu, China, has become the world's dumping ground for what is defined as “e-waste.” “Exporting Harm,” a 54-page report issued by the Basel Action Network (BAN), exposed the environmental horrors in this small town. Toner cartridges comprise a large portion of the town's problems.

The e-waste comes from familiar places like Los Angeles or Chicago, as identified by tags and plates on some of the debris. How did they end up here? Because someone wanted to have them recycled.

According to the report and videotape from BAN, recycling centers may collect e-trash, but then they become mere distribution centers for exporting the same. According to recycling insiders, about 80 percent of the e-waste collected by recyclers ends up in containers bound for Asia.

“When we released the report in February, we could not find one recycler who did not export all or part of the e-waste collected to Asia,” said Jim Puckett, coordinator of BAN. “And what we found in Asia was a cyber-age nightmare.”

This tragedy is compounded by the knowledge that the toner cartridge remanufacturing industry could have given many of those cartridges another life through reuse. Instead, through callous disregard, they have become tools of disaster and devastation.

“We found toner cartridges and printer laser units dumped or being burned in every place imaginable, from riversides, open fields, roadsides and irrigation canals,” said Puckett. “For some reason the cartridges were not recycled. Only the residual toner was being swept out by workers without any protection whatsoever. The toner billowed around their face and covered their bodies while they worked. The toner contains carbon black, a possible human carcinogen. Manufacturers claim that the toner is a respiratory irritant but not toxic under normal usage. What we witnessed in

Guiyu could hardly be called normal exposure.”

What’s worse, is that the waste or unused toner from the cartridges is often used to fill bottles of toner for resale. In shops throughout China, bottles of toner marked as original are for sale to refill cartridges. This sort of counterfeiting is rampant in Asia and affects aftermarket and original equipment manufacturers (OEMs) alike as it is very difficult to compete against these illegitimate products.

The reports of nuclear-winter like conditions in China were reported in the Hong Kong Post magazine, and forwarded to International Imaging Technology Council members by Colin Davison, managing director of Hip Kiu Manufacturing Ltd. of Hong Kong.

Recycling is certainly a laudable goal when reuse is not possible. OEMs of printers such as HP, Xerox and Lexmark all have programs to recover or recycle their products, including printers and cartridges.

Here are a few of the statistics about such programs from their websites.

“... the popular Prebate and Operation ReSource programs have motivated customers to return hundreds of thousands of empty cartridges to Lexmark for remanufacturing and recycling.”  
— from [www.lexmark.com](http://www.lexmark.com)

“Since 1992, HP has helped customers recycle millions of LaserJet print cartridges worldwide, successfully diverting thousands of tons of materials from the world’s landfills.”  
— from [www.hp.com](http://www.hp.com)

“The Xerox Green World Alliance is a worldwide initiative to encourage customers to recycle or dispose of supplies in a manner that minimizes impact to the environment. In 2000 alone this program prevented nearly 16 million pounds of waste from entering landfills. Customers worldwide returned more than three million cartridges to Xerox in 2000 for reuse and recycling.”

— from [www.xerox.com](http://www.xerox.com)

Clearly the recovery and recycling of these cartridges by the OEMs sounds like a desirable outcome. But do their recycling programs — intentionally or otherwise — involve the recycling centers and brokers that export the discarded debris to China and other developing countries?

And what other motive lies behind the cartridge recycling efforts, especially those that encourage cartridge returns? Each OEM is deeply committed to recovering its toner cartridges for another, more corporate-minded, goal: greed. New cartridge sales bring more to the bottom line, especially now that the printers are less expensive and less profitable.

Lexmark recently released another quarter’s financial statement reinforcing its “supplies-driven” profitability. It’s making more dollars from the sale of cartridges than the sale of printers. How environmentally friendly are its programs? Lexmark’s Prebate program gives a discount at the time of sale to customers if they agree to return the cartridge to Lexmark or at least not give it to a remanufacturer. So a customer has already been rewarded for buying this “environmentally friendly product,” and any incentive to recycle it is long forgotten.

When the cartridge is spent, the customer may find it inconvenient to return it to Lexmark. Still wanting to do the right thing, the customer attempts to sell or give it to a remanufacturer. The

cartridge's Prebate restrictions forbid its remanufacturing, so the preferable reuse option is foreclosed.

Still wanting to do the right thing, the customer might take the cartridge to a recycling center — and it ends up in Guiyu. At an earlier point in this scenario, most consumers would have just tossed the cartridge away, and it would end up in first-world landfills instead of third-world ones.

This program is the least environmentally friendly of all the OEM options.

As for the cartridges that do make it back to the OEMs, where do they end up and what does this recycling really entail? If they recover hundreds of thousands of cartridges as their programs claim, they have to go somewhere. Of these OEMs, only Xerox openly and avidly remanufactures its products. These cartridges are made of complicated components and industrial-grade plastic. They are not amenable to melt-down recycling nor are they biodegradable. The plastic won't even begin to decompose in a thousand years.

According to HP's own documentation, "HP LaserJet toner cartridges are newly manufactured to its own specifications and contain an average of 7 percent or less of recycled content (non-critical parts) across the entire line." So not much of the new cartridges are made up in appreciable part by the old cartridges. The OEM's need to sell new cartridges is far more compelling than the desire to use the old.

#### All Roads Lead to Guiyu

The inevitable conclusion is that the OEM cartridges are ending up in places like Guiyu. To determine if our theory was correct, we once again imposed upon Colin Davison to investigate. Two days before our deadline, Colin dropped everything and drove nine hours to Guiyu.

He reported finding Guiyu as described in the Hong Kong Post. He also examined the heaps of toner cartridges and reported that all of them bore the OEM brands of origin, including those manufactured by Lexmark, Hewlett Packard, Canon and Xerox. He did not find any aftermarket cartridges.

He described the scene as follows:

"To get to Guiyu, you first have to go through the town of Cheng Dian. Here you see no evidence of the appalling scenes we will see later. However you do see a lot of motorized farm trucks with all sorts of plastic containers on them. Further investigation reveals they are filling up every conceivable type and size of container with water from a single hose pipe to take to Guiyu about 10 kilometers away. The reason is the water from the wells in Guiyu is contaminated and even after boiling, does not become clean enough for drinking.

"On the way from Cheng Dian to Guiyu, there is a lot of rubbish and waste along the sides of the raised roads, some of it has been burnt and some is still burning. There is a smell of burning styrene in the air, and it is a choking stench. Still more trucks are taking their deadly cargo to a site for burning alongside a river. The site is still smoldering from the previous night's burning.

"The whole area comprises of low lying ground with channels used for irrigation and water management. Duck farming and growing water chestnuts are two of the activities carried out.

However, a look in one of the drainage channels, reveals a black, stinking, oily substance.

“As you reach some of the smaller villages before Guiyu, you begin to see the evidence of the deadly business. The car has to negotiate the piles of computer cases, printer circuit boards, copier and printer cases, and laser printer cartridges blocking the road. Houses and courtyards are also piled high with rubbish and waste.

“When you reach Guiyu, there are higher stacks of laser printer cartridges and beyond that near a retaining wall are masses of broken cartridges waiting to be burned. These have been stripped of the metal parts and are just waiting for incineration in the open.

“Further down the road are more laser printer cartridges. This time the stripping down is done right outside the front door of a home. A young boy and his puppy play in the contaminated waste with laser printer cartridges stacked around.

“We walk by another house with another mess in front of it. This time the cartridges clearly bear the HP brand. Toner spills from the casings, even color toner, so this stack must contain fairly recent models. The toner flows all over the ground.

“Further down the road, there are more piles of cartridges, which partially block the road with all the stripped parts separated into another pile. These cartridges bear the Canon brand.

“Toward the end of the village, there are still more businesses involved in stripping out of cartridges, and these are much larger in size and operation. There are a number of businesses this size with large yards full of empty cartridges.

“On a bend in the road where the road crosses a stream, we see another burning site. The waste from last night’s operation is still warm and the stench of styrene is choking. All the ash falls down the slope to the black stinking “liquid” below.

“As we are leaving the village, a truck speeds toward us in a cloud of dust from the dirt road. It’s filled to the brim with another cargo of laser printer cartridges for stripping out by the people of Guiyu.

“As we go through one of the other villages, there is a fish pond, which is home to great piles of waste 10 to 12 feet high of scrap cartridges, so high they reach the roof of the traditional Chinese houses in the background. These piles are in the compound of the tallest, biggest and most prominent building in the whole area. You see more trucks like the one we have just seen filling up with more sacks of cartridges and other rubbish for stripping out.

“The luxurious building stands in stark contrast to its poverty-stricken, refuse-riddled surroundings. It seems the center of the whole operation although we cannot be sure. We have a saying in England, ‘Where there’s muck, there’s brass’ (brass being slang for money). It certainly seems the case in Guiyu. Alternatively, maybe it’s the Guiyu headquarters of Lexmark, Hewlett Packard and Canon and soon we will see it being named Canon Towers, Hewlett Packard Plaza, and Lexmark Centre. Certainly we cannot be certain how these cartridges came to be in Guiyu, but it is clear who manufactured them in the first place.

“One cannot help but wonder how this has been allowed to happen. The area is about 500 kilometers from Hong Kong and so has missed out on a lot of the development and investment in the Pearl River Delta. I run an operation for remanufacturing in Guangzhou and have to comply with very strict and enforced environmental rules about what I do with the waste.



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“Easy access to waste materials and the location very close to the shoreline make this possible. If more cartridges were recycled properly and responsibly in developed countries, then the empty cartridges with valuable internal parts would not be available for export to China and stripping down. Only in such a low-cost area, where the environmental issues are not considered, can this be economical.

“I believe some of the cartridges taken off the market by the large OEMs for competitive reasons are more than likely ending up as the cartridges in this article. This creates more profits for the OEMs and misery for the people of Guiyu.”

Remanufacturing versus recycling? Game, set and match to remanufacturing, but the big loser is the town of Guiyu.

BAN is working to get the United States to ratify the Basel Convention and its amendments, which will make the exporting of toxic e-waste illegal. The organization's videotape on Guiyu is quite moving and is available for a small donation at [www.ban.org](http://www.ban.org), as is a free copy of *Exporting Harm*. Some of the photos used in this article, as well as the cover photo, are property of BAN and we are grateful to Coordinator Jim Puckett for his allowing the International Imaging Technology Council to use them.

We also thank Colin Davison and the folks at Hip Kiu.

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