



Classic Computer Recovery, Inc.

Turn the Upcoming TV Storm into an E-Waste Solution Instead of a Toxic Problem

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During the first year alone, it is estimated that 28 million TVs will enter the solid waste stream because of the FCC-mandated digital switchover in February 2009 (this represents 10% of the total analog TVs currently being used in households today). Special interest groups like Silicon Valley Toxics Coalition, environmentalists, and many pro-recyclers expect the TV producers to pay for this. But they also have to consider that the mostly likely thing to happen will be that the residents will dispose of their TVs curbside in the 45 non-legislated states. If that happens then the environmentalists and pro recyclers need to come up with a solution for the cities, counties, state governments, and solid waste industry to take care of this problem through their current existing solid waste hauler when the TVs are disposed of at the curb. The question we should all be asking is how we can give incentive to the solid waste haulers to do this with absolutely no cost motivators to use as offsets to **CONVINCE THEM** to do the *right thing* and sort the TVs out of their normal curbside garbage pick ups which are automatically hauled to a land fill?

It is understandable that some of the cities, counties and state governments aren't necessarily motivated to pursue this challenge because they may already have a waste hauler's contract in place that covers the time frame of Nov 2008- Dec 2009 when the first round of analog TVs are expected to come out into the waste stream for disposal. To that end, the amount of weight that TVs will produce in comparison to the entire solid waste stream represents a 1-2% increase which many of the counties and cities feel the haulers can manage with their current weekly residential garbage day pick ups. ***Therein lies the problem.*** It doesn't take an "nth" of the toxic elements in a TV leeching into the earth through a water stream to negatively affect future generations. If a current contract exists with a given city or county, the waste hauler has to pick up TVs with their garbage trucks which are more than capable of crushing TVs to small pieces as they do with the other residential garbage on the weekly garbage day pick ups. Crushing the TVs in today's garbage trucks automatically creates the hazardous waste. The trucks drive straight to land fills with their loads which costs the haulers (and ultimately the residents) a tipping fee of anywhere from \$23-\$70/ton on average depending on what part of the country they are operating in.

In the absence of additional funds to supplement sorting this product category out of the waste stream, **LAND FILLING** is the easiest economic and operational logistic solution to choose for disposing of TVs when the FCC converts the TV broadcast signal from analog to digital in the 45 non-legislated states.

After talking to several of the largest counties in the Midwest (MI, IL, OH, IN, WI) there will be no other better choice because there is no financial incentive for the current garbage hauler to do anything but **LAND FILL** in lieu of the volume expected to come out of the largest counties in the US. It is safe to assume that this will probably be the case in all of the largest counties across the nation and many medium size counties that simply **DO NOT** have extra "budget" dollars appropriated for this event.

Get your state and local governments to start pounding on the FCC for additional monies for the *solid waste industry to have incentive to sort them out of the solid waste/land fill stream during this very crucial first year of the switch over to digital broadcasting.*

Ask for subsidies to help you with this glut of toxic electronics. Even a small subsidy in the amount of \$4-\$5 per television would be enough to offset the cost of sorting the TVs out of the garbage stream **for the first**

year in the US until a proper infrastructure can be built by both the Solid Waste Industry through either curbside special truck pick ups or through numerous Permanent Drop Offs scattered around each county. At most, this would cost the FCC \$126M, for the first year, which is nothing compared to the billions they are going to make by freeing up some of the analog bandwidth and selling it to the wireless companies.

In concert with pursuing the FCC to subsidize the solid waste industry for handling, we also need to convince the TV producers to pay the recyclers 25¢ per lb (1/2 the cost of what California is charging) to partner with the haulers to properly recycle the TVs per the TV producers standards. If this could be accomplished, the haulers could also charge the recyclers for hauling the TVs in special trucks from curbside to the recycler warehouses

This would also create more jobs in the recycling industry and it would give the solid waste industry incentive to do the **right thing** and sort the TVs out of the regular garbage pick ups instead of land filling them. And it would also allow the haulers to cover the costs of additional hauling that will be required to take them from curbside to an MRF or from a PDO to an E-waste Recycler because the E-waste Recyclers would pay for the hauling fees.

Contact your state and local government and these FCC officials:

Evan.Baranoff@fcc.gov	(202)418-2120	Media Bureau, Policy Division
Eloise.Gore@fcc.gov	(202)418-2120	Media Bureau, Policy Division
Nazifa.Sawez@fcc.gov	(202)418-1600	Media Bureau, Video Division
Alan.Stillwell@fcc.gov	(202)418-2470	Office of Engineering & Technology

If this can be accomplished we have a “good chance” at solving the e-waste problem in the U.S. IF WE CAN GET U.S. RESIDENTS TO SET THEIR TVs OUT CURBSIDE WITH THEIR OTHER GARBAGE or to bring them to a PDO, then we can most likely talk them into setting out all their unused, stock piled computer and electronic equipment currently stored in their basements, garages, attics and closets.

This could be easily executed with a low cost or no cost Public Announcement campaign to run in conjunction with the sales boom of New HDTVs which will begin in Nov 2008 and last through at least the first 5 months of the new year if not the entire year of 2009 after the FCC switch deadline of Feb 17th, 2009.

Of course it will require the TV/Monitor manufacturers to pay an extended producer responsibility fee that will probably be legislated nationally down the road, but that may take longer to accomplish. In the meantime, the TV manufacturers need to be approached to cover the US Retailers with a \$20 coupon off the purchase price of every HDTV sold when residents bring in one analog TV for recycling during the first year. That \$20 coupon will provide the retailer with an additional \$2.50 handling fee to package the TVs on skids, with the balance of the \$20 to go to the e-waste processor to properly recycle the TVs.

Additionally, the E-waste processors could further jump start this momentum if they can get as many TV/Monitor manufacturers to start planning end of life management for all of their electronic products.

We realize this is all going to be a challenge to accomplish in one year but it starts with the FCC and the TV/monitor manufacturers funding some \$ for the solid waste haulers to handle the TVs and for the e-waste recyclers to properly recycle them per the TV producers standards.

<<See Toxics Chart on next page>>

TOXICS

The TV Storm is coming... Is America Ready?

By Classic Computer Recovery, Inc.

Based on 1 in 4 HH Disposing 1 Analog TV

Putting this in perspective. How much is that?

Unit of Measure	Average US City 100,000 HH	Total U.S. 114,000,000 HH
Number of Units	25,000.00	28,500,000
Semi Truck Loads	130.21	148,438
Number of Tons	875	997,500
Cubic Yards (Yd ³)	5,733.94	6,536,697
Estimated Land Fill Costs	\$35,000.00	\$39,900,000

What is in your Electronic Waste?

Toxic Metals and Compounds	Percent by Weight	Average US City (Pounds)	Total U.S. (Pounds)
Arsenic ^{1,3}	0.00%	22.75	25,935
Beryllium ^{1,3}	0.02%	274.75	313,215
Cadmium ^{1,3}	0.01%	164.5	187,530
Hexavalent Chromium ^{1,3}	0.01%	110.25	125,685
Lead ^{1,3}	6.30%	110,229.00	125,661,060
Mercury ^{1,3}	0.00%	38.5	43,890
Plastics (including PVC) ^{2,3}	18.39%	321,870.50	366,932,370
PBDE ^{2,3,4,5,6}	4.60%	80,467.45	91,732,893

The following Metals may be toxic if vaporized, present in dust, ash or high concentration, mixed with other chemicals, leach into the ground water, etc. The size of the particulate is proportionately related to rate of leaching.

Aluminum	14.17%	248,015.25	282,737,385
Germanium	0.00%	28	31,920
Gallium	0.00%	22.75	25,935
Iron	20.47%	358,246.00	408,400,440
Tin	1.01%	17,636.50	20,105,610
Copper	6.93%	121,252.25	138,227,565
Barium	0.03%	551.25	628,425
Nickel	0.85%	14,880.25	16,963,485
Zinc	2.20%	38,580.50	43,981,770
Tantalum	0.02%	274.75	313,215
Indium	0.00%	28	31,920
Vanadium	0.00%	3.5	3,990
Gold	0.00%	28	31,920
Europium	0.00%	3.5	3,990
Titanium	0.02%	274.75	313,215
Ruthenium	0.00%	28	31,920
Cobalt	0.02%	274.75	313,215
Palladium	0.00%	5.25	5,985
Manganese	0.03%	551.25	628,425
Silver	0.02%	330.75	377,055
Antimony	0.01%	164.5	187,530
Bismuth	0.01%	110.25	125,685

Selenium	0.00%	28	31,920
Niobium	0.00%	3.5	3,990
Yttrium	0.00%	3.5	3,990
Silica	24.88%	435,405.25	496,361,985
TOTAL	99.99%	1,749,907.95	1,994,895,063

Source: Microelectronics and Computer Technology Corporation (MCC), 1996

[1 OSHA - Toxic Metals - http://www.osha.gov/SLTC/metalsheavy/index.html](http://www.osha.gov/SLTC/metalsheavy/index.html)

[2 Silicon Valley Toxics Coalition - Poison PC's/Toxic TV's - svtc.igc.org/cleancc/pubs/ppc-ttv1.pdf](http://svtc.igc.org/cleancc/pubs/ppc-ttv1.pdf)

[3 Silicon Valley Toxics Coalition - TOXICS IN ELECTRONICS - svtc.etoxics.org/site/PageServer?pagename=svtc_toxics_in_electronics](http://svtc.etoxics.org/site/PageServer?pagename=svtc_toxics_in_electronics)

[4 EPA - Pollution Prevention and Toxics - www.epa.gov/oppt/pbde](http://www.epa.gov/oppt/pbde)

[5 EHP - The PBDEs: An Emerging Environmental Challenge - www.ehponline.org/docs/2000/108p387-392hooper/hooper-full.html#pbde](http://www.ehponline.org/docs/2000/108p387-392hooper/hooper-full.html#pbde)

[6 Science News - E-Waste Hazards - www.sciencenews.org/articles/20070714/fob3.asp](http://www.sciencenews.org/articles/20070714/fob3.asp)