

Right-to-know a little.....

**Exposing double standards in
global high-tech production**

**Silicon Valley Toxics Coalition
Clean Computer Campaign
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Executive Summary

The Clean Computer Campaign, a project of the Silicon Valley Toxics Coalition, has completed the most comprehensive analysis ever published which evaluates the environmental information contained on the web sites of 44 of the largest high-tech companies in the world. The report evaluates 8 key indicators¹ in an effort to answer the following question:

Are high-tech companies providing consumers with enough information to make informed decisions about buying “green” electronic products?

(For a summary of the many environmental and health impacts of high-tech production – see <http://www.svtc.org>)

Many of the findings of the analysis are significant and some are surprising:

The Findings:

- ◆ Japanese companies received the top scores in 7 out of the 8 categories evaluated.
- ◆ Only 4 companies -- 3 Japanese companies (Canon, NEC and Mitsubishi) and 1 US company (IBM) scored above 50%, but even the top companies scored below 65% overall.
- ◆ U.S. companies (as well as other transnational high-tech companies) practice “double standards” in their global environmental behavior, meeting higher standards in Europe and Japan than in the U.S. due to weaker U.S. regulations. No company provided enough reliable information to evaluate their performance in the third world.
- ◆ Several companies exhibit environmental leadership in a few key areas by phasing out some of the most toxic materials in their products, by designing some “green” products, as well as by taking back and recycling older products.
- ◆ Some companies have made significant improvements in their environmental disclosures since the publication of the first Report Card last year.
- ◆ Brand name consumer products companies tended to score higher than components manufacturers.
- ◆ U.S. and Korean companies were the “cellar dwellers” in most of the key categories.

The report makes the following recommendations to consumers:

- ◆ Consumers need and deserve much better information on the environmental and health impacts of consumer electronic products.
- ◆ Consumers should buy only “necessary” consumer electronics products and reward “greener” companies with their consumer dollars and punish the “cellar dwellers” by not buying their products.
- ◆ Consumers are a powerful force in changing the environmental priorities of consumer electronics companies when exerting informed buying habits and communicating their environmental concerns directly to the companies. See http://www.svtc.org/cleancc/4ht_letters.htm for examples of letters to computer companies (including their email addresses).

¹ Product Stewardship, Water, Hazardous/Toxic Chemicals, Energy, Suppliers, Occupational Health, International and Ease of Access to Information

Discussion

The right-to-know is a sacred public trust. Consumers both need and want to know pertinent information in order to make informed decisions when spending hard-earned dollars. Historically, retailers and producers have used the buzzwords "smaller", "faster" and "cheaper" as the mantra for holiday buying. Now it is time, given the huge environmental impact of high-tech production, for consumers to insist on a new mantra: "greener", "cleaner" and "more recycle-able". This is particularly important since most consumers are unaware of the toxic footprint and legacy of consumer electronics production, ranging from extensive groundwater pollution to serious occupational illness and air pollution. See www.svtc.org for further extensive information.

The broad range of overall scores by company (from 0 - 55 out of a possible score of 87 points) illustrates the disparity among these high-tech companies in the disclosure on their websites of their environmental information, based on the 8 key indicators identified¹.

See page Appendix C on page **25** for a description of the methodology used in this report.

The U.S. high-tech industry has often been lauded as the global leader in technology developments as well as a leader in disclosing environmental information. This survey uncovers significant double standards in global environmental reporting, as U.S. high-tech companies rank a poor second or third - - and in some cases live in the cellar -- when compared to other global consumer electronics companies.

Scoring Trends

- ◆ More Japanese than American companies scored in the top 50% of the following categories: Product Stewardship, Energy and Hazardous Materials. They scored near the bottom of the Suppliers and Occupational Health categories.
- ◆ American companies exhibit the opposite trend. More American than Japanese companies scored better in the Suppliers and Occupational Health categories and near the bottom of most of the rest of the categories.
- ◆ Korean companies are at the bottom of every category.
- ◆ European companies are scattered, mostly in the middle and high ranges, but do well on reporting on energy.

Top Scores

Overall: Out of a possible 87 points: Canon (Japan) had 55 points; **that's an overall score of 63%**

Product Stewardship: 24 total points: Fujitsu (Japan) had 18 points (75%)

Water: 15 total points: Canon (Japan), NEC (Japan), Phillips (Europe) and ST Microelectronics (Europe) all scored 10 points (66.7%)

Hazardous materials: 12 total points: Toshiba (Japan) scored 10 points (83%)

Energy: 12 total points: Canon, Mitsubishi and Sony (all Japanese companies) all had 100%

Suppliers: 6 total points: Sanyo (Japan) Hewlett-Packard (USA) tied at 5 points each (83%)

Occupational Health: 6 total points: AMD, Compaq, Intel, Lucent, Motorola, National, Texas Instruments (all US companies) and Sony and NEC (Japanese) scored 2 points each (33.3%)

International: 9 points: Canon (Japan) 6 points (66.7%)

Ease to access: 3 total points: Canon and Mitsubishi (Japan); ST Microelectronics (Europe); Agilent (US) scored the maximum 3 points for 100%

Double standards

Take-back - establishing programs globally

New legislation in the European Union mandates that producers of electrical and electronic equipment be physically and financially liable for their products at the end of their consumer life. Similar legislation in Japan for certain products has passed and will soon take effect. In anticipation of this legislation, some US companies have instituted take-back programs in Europe and Asia. However, the same companies are not showing the same leadership in the U.S. and are, in fact, resisting efforts to implement similar programs in the US. Clearly, the "voluntary" market-based approach is not working. For instance:

- ◆ Apple has implemented take back/recycling programs in Germany, but not in the U.S.
- ◆ Dell has programs in Germany, Sweden, Norway, the Netherlands and Taiwan, but not in the U.S.
- ◆ IBM has been involved in electronics takeback in Europe since 1989, and only recently announced a program in the US (although the U.S. program requires consumers to pay **\$29.99** while some European and Japanese programs are free of charge to consumers)
- ◆ Since 1996, Sony has provided financial incentives for consumers to bring back old monitors for recycling at their many centers in Germany. In the U.S., Sony has recently announced one new recycling center, but provides no financial incentives.

Product Stewardship--exhibiting environmental leadership

A few companies have phased out some toxic products and incorporated design for the environment into their manufacturing.

- ◆ Matsushita/Panasonic uses lead-free solder in its portable mini-disc player and produces halogen-free circuit boards (p.12 of their environmental report, "Technology Development" section)
- ◆ Fujitsu has clear lead reduction goals:
 - " Starting October 2000, the entire LSI products will be made lead-free"
 - " Starting December 2001, lead-free solder will be adopted for ½ of the entire printed circuit board production."
 - "Starting December 2002, the complete elimination of lead will be targeted.
(http://fujitsu.co.jp/hypertext/About_fujitsu/environment/eco_20000321_e.html)
- ◆ IBM's Intellistation E-Pro is made with 100% recycled plastic resin.
(<http://www.ibm.com/Press/prnews.nsf/jan/D0C6404515752B6E85256727004E924F>)

It is clear that many toxics CAN be phased out. We challenge **all** global high-tech companies to be leaders and adopt these and other breakthrough technologies. It is time for companies to use their technological, intellectual and financial resources to assure that their production processes and their products (throughout their lifecycle) will safeguard environmental, community and worker health.

Fujitsu, Hewlett-Packard and Canon were the highest scorers of the group, receiving scores of 18, 17 and 16, out of 24, respectively.

AMD, Applied Materials, Flextronics, Maxtor, Seagate, Silicon Graphics, Sumitomo Electric, Daewoo, Hyundai, Lucky Goldstar and SK Electronics all scored 0.

Hazardous and Toxic Chemicals - disclosing releases and use

When the Toxics Release Inventory (TRI) was enacted in 1986, SVTC was the first group in the nation to obtain, analyze and publish a report documenting the toxic emissions in a local region. The report sent shock waves throughout Silicon Valley and subsequent publicity reached other high-tech areas throughout the country and the world. While TRI was an important initial step, critical information regarding chemical usage was not included in the law. Pollution Release and Transfer Registry (PRTR) takes TRI a step further, and is being adopted by many countries throughout the

industrialized world. Most Japanese companies and Samsung (a Korean company) are now providing information about the amounts of chemicals used, released to air, water and land as well as the amounts recycled. In anticipation of the PRTR rules being widely adopted, many companies – especially Japanese companies -- have started to disclose their chemical usage on their web sites. U.S. companies, which were the global leaders in terms of toxic chemical release information, have now fallen behind.

Toshiba, Epson and Fujitsu had the highest scorers with a score of 10, 8 and 8 out of 12, respectively.

Applied Materials, Dell, Flextronics, Harris, Hewlett-Packard, Lucent, Maxtor, Seagate, Silicon Graphics, Epson, Sanyo, Sumitomo Electric, Daewoo, Hyundai, Lucky Goldstar and SK Electronics all scored a 0.

International operations- ensuring the highest protection in the era of globalization

High-tech companies operating in the US are required to adhere to environmental and health and safety regulations to protect community, worker and environmental health. The globalization of the industry makes it incumbent on the manufacturers to guarantee that the most health protective regulations are used in their global manufacturing operations. Less stringent local environmental regulations or weaker infrastructure should not be used as a reason for not ensuring the highest level of environmental and occupational health protection.

Canon was the only company to score a full 6 out of 6, while other high scores include IBM with a score of 5 and NEC, National, Hewlett-Packard and AMD all with a score of 4.

Agilent, Applied Materials, Texas Instruments, Sun Microsystems, Sumitomo Electric, Solectron, SK Electronics, Silicon Graphics, Siemens, Seagate, Philips, Maxtor, Lucky Goldstar, Kyocera, Komag, Hyundai, Harris, Flextronics, Epson and Daewoo all scored 0.

Suppliers/subcontractors - maintaining corporate responsibility in the supply chain

It is increasingly important that high-tech companies establish criteria to ensure that their suppliers and subcontractors are held to the same high environmental standards. Major global subcontractors include Solectron and Flextronics, which increasingly are doing the manufacturing of components for many well-known electronics companies (i.e. Hewlett-Packard and Intel). Suppliers include chemical suppliers and toxic waste handlers. Most of these manufacturing sub-contractors have little or no environmental or health information on their web sites, and appear to have less well developed environmental programs than the better known consumer electronics companies. It is important that the leadership companies use their resources and influence to encourage more responsible environmental behavior by these sub-contractors. All companies should disclose the criteria used in selecting and monitoring the environmental performance of their subcontractors.

Sanyo, Hewlett-Packard and IBM had the highest scores in the group, receiving 5,5 and 4 out of 6, respectively,

Toshiba, Sumitomo Electric, Solectron, SK Electronics, Silicon Graphics, Siemens, Seagate, Samsung, Quantum, Oki, Mitsubishi, Maxtor, Lucky Goldstar, Kyocera, Komag, Hyundai, Hitachi, Applied Materials, Harris, Flextronics, Epson, Daewoo all scored 0.

Energy -

3 Japanese companies (Canon, Mitsubishi and Sony) earned a perfect 12.

Lowest scorers in the group include: Agilent, Applied Materials, Flextronics, Harris, Komag, Maxtor, National, Quantum, Seagate, Silicon Graphics, Solectron, Daewoo, Hyundai, Lucky Goldstar and SK Electronics, all received a score of 0.

Water Use - adopting water efficiency technologies

Some US firms in Europe and Asia have managed to "close the loop" in their manufacturing processes and use recycled water. In spite of concerted activities by SVTC and others, very few high-tech companies are closing the loop on their enormous wastewater discharges in the U.S.

Canon, NEC, Philips and ST Microelectronics all received scores of 10 out of 15.

Agilent, Applied Materials, Dell, Flextronics, Harris, Hewlett-Packard, Lucent, Maxtor, Seagate, Silicon Graphics, Epson, Sanyo, Sumitomo Electric, Daewoo, Hyundai, Lucky Goldstar and SK Electronics all received a score of 0.

From 1 year to the next

SVTC's report cards and other campaign initiatives, including work with socially responsible shareholders (such as the Interfaith Center on Corporate Responsibility and socially responsible investment firms such as Calvert and Pax Fund) and letter-writing campaigns are effective ways of improving corporate accountability in environmental reporting. SVTC has engaged in shareholder dialogues with AMD, IBM, Intel, Hewlett-Packard and there has been some progress.

Specifically,

- ◆ Hewlett-Packard placed its criteria for suppliers and subcontractors on its website
- ◆ AMD, IBM and Intel have also begun to include more information about their overseas facilities on their websites

We hope that next year's report card will show marked improvements among all companies within each of the indicators specified.

Conclusions

This research is timely. The global high-tech industry is the largest and fastest growing manufacturing sector in the world. Computer manufacturing, because of its dependence on massive amounts of natural resources and toxic chemicals, has too often had negative impacts on community, worker and environmental health. Therefore, producers of computers and other electronic equipment **must** be as committed to providing reliable environmental data and to working towards sustainability as they are to increasing their global profits.

Although scoring highly in most areas of the report card, it is clear that many companies also use their websites for "greenwashing" – creating a misleading and unwarranted image of environmental performance. Consumers can easily be swayed into believing information that makes a company appear "greener" than reality dictates. We strongly dissuade any company from utilizing statements without including facts as well. We have highlighted several examples and will continue to expose "greenwashing" when we see it.

Consumers are encouraged to pay attention to the leaders and laggards of this industry and to use the power that we all carry in our wallets to send a message. A good place to start is by rewarding those companies that are doing a better job and by not purchasing from the companies that are the 'cellar dwellers.'

We make the following recommendations to consumers:

- ◆ Consumers need and deserve much better information on the environmental and health impacts of consumer electronic products.
- ◆ Consumers should buy only "necessary" consumer electronics products and reward "greener" companies with their consumer dollars and punish the "cellar dwellers" by not buying their products.

- ◆ Consumers are a powerful force in changing the environmental priorities of consumer electronics companies when exerting informed buying habits and communicating their environmental concerns directly to the companies. See http://www.svtc.org/cleancec/4ht_letters.htm for examples of letters to computer companies (including their email addresses).

Consumer Product Leaders and Laggards

Company Name	Points received out of 87	Percentage of the Total
Canon (J)	55	63.20%
IBM (USA)	51	58.60%
NEC (J)	49	56.30%
Mitsubishi (J)	44	50.60%
Sony (J)	43	49.40%
Fujitsu (J)	43	49.40%
Toshiba (J)	41	47.10%
Matushita (J)	40	46.00%
Sharp (J)	38	43.70%
Motorola (USA)	33	37.90%
Sanyo (J)	33	37.90%
Phillips (E)	32	36.80%
Hewlett-Packard (USA)	32	36.80%
Hitachi (J)	32	36.80%
Apple (USA)	31	35.60%
Compaq (USA)	31	35.60%
Epson (J)	27	31.00%
Oki (J)	24	27.60%
Dell (USA)	19	21.80%
Samsung (K)	16	18.40%
LG Goldstar (K)	0	0%