Appendix A: EPA's Draft List of PBTs Commonly Found in Hazardous Waste

PBT Chemical Name	Chemical Abstract Service (CAS) Number (A given chemical may have more than one name but only one CAS number. Use CAS numbers to search numerous databases for more information on these chemicals.)
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Antimony	7440-36-0
Arsenic	7440-38-2
Benzo(g,h,i) perylene	191-24-2
Beryllium	7440-41-7
Bis(2-ethylhexyl) phthalate [See also Di(2-ethylhexyl) phthalate (DEHP)]	117-81-7
Butylbenzyl phthalate	85-68-7
Cadmium	7440-43-9
Chloroform	67-66-3
Chromium	7440-47-3
Copper	7440-50-8
Cyanide	57-12-5
Dibutyl phthalate (DBP)	84-74-2
Di(2-ethylhexyl) phthalate (DEHP) [See also Bis(2-ethylhexyl) phthalate]	117-81-7
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
1,1-Dichloroethane [See also Ethylidene dichloride]	75-34-3

EPA's Draft List of PBTs Commonly Found in Hazardous Waste (cont'd)

Dioxins [See also Polychlorinated dibenzodioxins (PCDD)]	No CAS number has been assigned to this class of chemicals. However, individual chlorinated dioxin compounds have CAS numbers (e.g., the CAS No. for 2,3,7,8-TCDD is 17646-01-6). See http://www.epa.gov/tri/TRIdioxinguidance.pdf for more information on how dioxins are to be reported to the national Toxics Release Inventory (TRI).
Endosulfan, alpha-	959-98-8
Endosulfan, beta-	33213-65-9
Ethylidene dichloride [See also 1,1-Dichloroethane]	75-34-3
Fluoranthene	206-44-0
Fluorene	86-73-7
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
Hexachlorobenzene (HCB)	118-74-1
Hexachloro-1,3-butadiene (Hexachlorobutadiene)	87-68-3
Hexachlorocyclohexane, gamma [See also Lindane]	58-89-9
Lead	7439-92-1
Lindane [See also Hexachlorocyclohexane, gamma]	58-89-9
Mercury	7439-97-6
Methoxychlor	72-43-5
Methyl chloroform [See also 1,1,1-Trichloroethane]	71-55-6
2-Methylnaphthalene	91-57-6
Naphthalene	91-20-3
Nickel	7440-02-0
Nitrobenzene	98-95-3
Octachlorostyrene (OCS)	29082-74-4
Pentachlorobenzene	608-93-5

EPA's Draft List of PBTs Commonly Found in Hazardous Waste (concluded)

Pentachloronitrobenzene [See also Quintozene]	82-68-8
Pentachlorophenol (PCP)	87-86-5
Phenanthrene	85-01-8
Phenol	108-95-2
Polychlorinated dibenzodioxins (PCDD) [See also Dioxins]	No CAS number has been assigned to this class of chemicals. However, individual chlorinated dioxin compounds have CAS numbers (e.g., the CAS No. for 2,3,7,8-TCDD is 17646-01-6). See http://www.epa.gov.tri/TRIdioxinguidance.pdf for more information about how dioxins are to be reported to the national Toxics Release Inventory (TRI).
Polychlorinated dibenzofurans (PCDFs)	No CAS number has been assigned to this class of chemicals. However, individual chlorinated furan compounds have CAS numbers (e.g., the CAS No. for 2,3,7,8-TCDF is 51207-31-9). See http://www.epa.gov/tri/TRIdioxinguidance.pdf more information about how PCDFs are to be reported to the TRI.
Polycyclic aromatic hydrocarbons/compounds (PAHs/PACs)	No CAS number has been assigned to this class of chemicals. However, individual PAHs have CAS numbers. (See http://www.epa.gov/tri/pac.pdf for more information about how PAHs are to be reported to the TRI.)
Pyrene	129-00-0
Quintozene [See also Pentachloronitrobenzene]	82-68-8
Selenium	7782-49-2
1,2,4,5-Tetrachlorobenzene	95-94-3
1,2,4-Trichlorobenzene	120-82-1
1,1,1-Trichloroethane [See also Methyl chloroform]	71-55-6
2,4,5-Trichlorophenol	95-95-4
2,4,6-Tris(1,1-dimethylethyl) phenol	732-26-3
Zinc	7440-66-6

Appendix B: Denmark S/D Vendor Questionnaire

5. SUBSTANCES AND MATERIALS IN THE PRODUCT

Hazardous substances	Present in the product	Not present in the product	Don't know
Arsenic and –compounds	☐	☐	☐
Beryllium oxide, BeO	☐	☐	☐
Lead and –compounds	☐	☐	☐
Brominated flame retardants	☐	☐	☐
Cadmium and –compounds	☐	☐	☐
Hexavalent chromium	☐	☐	☐
Lithium compounds	☐	☐	☐
Copper and –compounds	☐	☐	☐
Mercury and –compounds	☐	☐	☐
Nickel and –compounds	☐	☐	☐
PCB	☐	☐	☐
PVC	☐	☐	☐
Selenium	☐	☐	☐

Scarce resources

Material	Present in the product	Not present in the product	Don't know
Gold	☐	☐	☐
Palladium	☐	☐	☐
Platinum	☐	☐	☐
Silver	☐	☐	☐
Tin	☐	☐	☐
Zinc	☐	☐	☐

Is the product's packaging made from recycled materials? Fully ☐ Partly ☐ % ___ No ☐
Is the product's user's manual made from recycled paper? Fully ☐ Partly ☐ % ___ No ☐
The weight of the user's manual? _____ grams

6. DISPOSAL FRIENDLINESS

Component	Easy to separate*	Not easy to separate*	Not present in the product
Wire/Cord	☐	☐	☐
Power supply	☐	☐	☐
Electronic display	☐	☐	☐
Printed wire board	☐	☐	☐
Flame retarded plastic part	☐	☐	☐
House	☐	☐	☐
Keyboard or touch board	☐	☐	☐
Microphone	☐	☐	☐
Loudspeaker	☐	☐	☐
Selenium drum	☐	☐	☐
Mercury switch	☐	☐	☐
Nickel-cadmium switch	☐	☐	☐
NiMH battery	☐	☐	☐
Lithium battery	☐	☐	☐
Mercury battery	☐	☐	☐
Regular battery	☐	☐	☐
Colour or toner cartridge	☐	☐	☐

7. DESIGN ISSUES

Component can be eliminated or made smaller	Component can be repaired or up-graded
	☐
	☐
☐	☐
☐	☐
☐	☐
	☐
	☐
	☐
	☐
☐	☐
☐	☐
☐	☐
	☐
☐	☐
☐	☐
☐	☐
☐	☐

Does the producer take back the product? Yes ☐ No ☐

*The component is easy to separate if it can be separated non-destructively with normal tools.

Appendix C: The Ericsson List of Banned and Restricted Substances

PURPOSE

The purpose is to meet laws and legislation or expected new laws and legislation due to strong trends in the countries we are operating in.

DIRECTIVE

These lists specify the chemical substances that are generally banned from Ericsson´s operations.

The substances are not to be present in the products Ericsson delivers to the market nor in products Ericsson purchases from other suppliers, and pertains to everything from electronics to furniture and other materials.

Nor shall they be present in the production processes used in fabrication of the products.

A sub-division has been made, with two lists of banned substances and another two lists of substances, which are to eventually phased out. This is to be interpreted such that

- banned substances shall under no circumstances be present, not even in low concentrations,

- restricted substances shall be phased out as soon as possible and replaced with technically and economically acceptable alternatives. This assumes that alternative solutions are actively being sought.

The focus of the ban and the restriction are on any deliberate use of the listed chemical substances.

Conversely, the ban or restriction does not apply in any cases where such a presence derives from a natural contamination, that is, an undesired presence in very small concentrations.

APPLICATION

All product managers, product design functions and purchasing functions are responsible as well as Ericsson suppliers.

The Ericsson list of banned substances (in products)

	Group of substances	Substance	Chemical name	CAS-number	Main area of use	Main risk
1	Metals	Cadmium and its compounds except in batteries and thick film pastes		Various	Pigments	Toxic
		-	Leadchromate	7758-97-6	Pigments	Bioaccummulative
		Mercury and its compounds except in electric lighting		Various	Electronic equipment.	Toxic
2	CFCs-chlorofluorocarbons	CFC 11	Trichlorofluoromethane	75-69-4	Solvents and coolants	Ozone depletion
		CFC 113	1.1.2-trichloro-1.2.2-trifluoroethane	76-13-1		
		CFC 114	Tetrafluorodichloroethane	76-14-2		
		CFC 115	Chloropentafluoroethane	76-15-3		
		CFC 12	Dichlorodifluoromethane	75-71-8		
3	HCFCs-chloroflourohydrocarbons	HCFC 22	Chlorodifluoromethane	75-45-6		
4	Brominated flame retardants	PBB - polybrominated biphenyls	Dekabromobiphenyl	13654-09-6	Plastics	Bioaccumulative
		PBDE - polybrominated diphenylethers	Pentabromodiphenylether	32534-81-9		
			Octabromodiphenylether	32536-52-0		
			Decabromodiphenylether	1163-19-5		
5	Halons-bromofluorochlorocarbons	Halon 1211	Bromodifluorochloromethane	353-59-3	Fire extinguisher	Ozone depletion
		Halon 1301	Bromotrifluoromethane	75-63-8		
		Halon 2402	Dibromotetrafluoroethane	124-73-2		
6	Chlorinated hydrocarbons	-	Carbon tetrachloride	56-23-5	Solvents	Ozone depletion
		-	Methylene chloride	75-09-2		Carcinogenic
		-	1.1.1-trichloroethane	71-55-6		Ozone depletion
		Chloroparaffins	-	63449-39-8	Lubricants, plasticisers	Bioaccumulative

The Ericsson list of banned substances (in production)

	Group of substances	Substance	Chemical name	CAS-number	Main area of use	Main risk
1	CFCs-chlorofluorocarbons	CFC 11	Trichlorofluoromethane	75-69-4	Solvents and coolants	Ozone depletion
		CFC 113	1.1.2-trichloro-1.2.2-trifluoroethane	76-13-1		
		CFC 114	Tetrafluorodichloroethane	76-14-2		
		CFC 115	Chloropentafluoroethane	76-15-3		
		CFC 12	Dichlorodifluoromethane	75-71-8		
2	HCFCs-chloroflourohydrocarbons	HCFC 22	Chlorodifluoromethane	75-45-6		
		HCFC 141 b	1.1-dichloro-1-fluoroethane	1717-00-6		
		HCFC 142 b	1-chloro-1.1-difluoroethane	75-68-3		
3	Chlorinated hydrocarbons	-	Carbon tetrachloride	56-23-5	Solvents	Ozone depletion
		-	Methylene chloride	75-09-2		Carcinogenic
		-	1.1.1-trichloroethane	71-55-6		Ozone depletion
		-	Chlorobromomethane	74-97-5		
4	Surfactants	Nonylphenolethoxylates	Nonylphenolpolyglycolethers	9016-45-9	Cleaning agents	Bioaccumulative

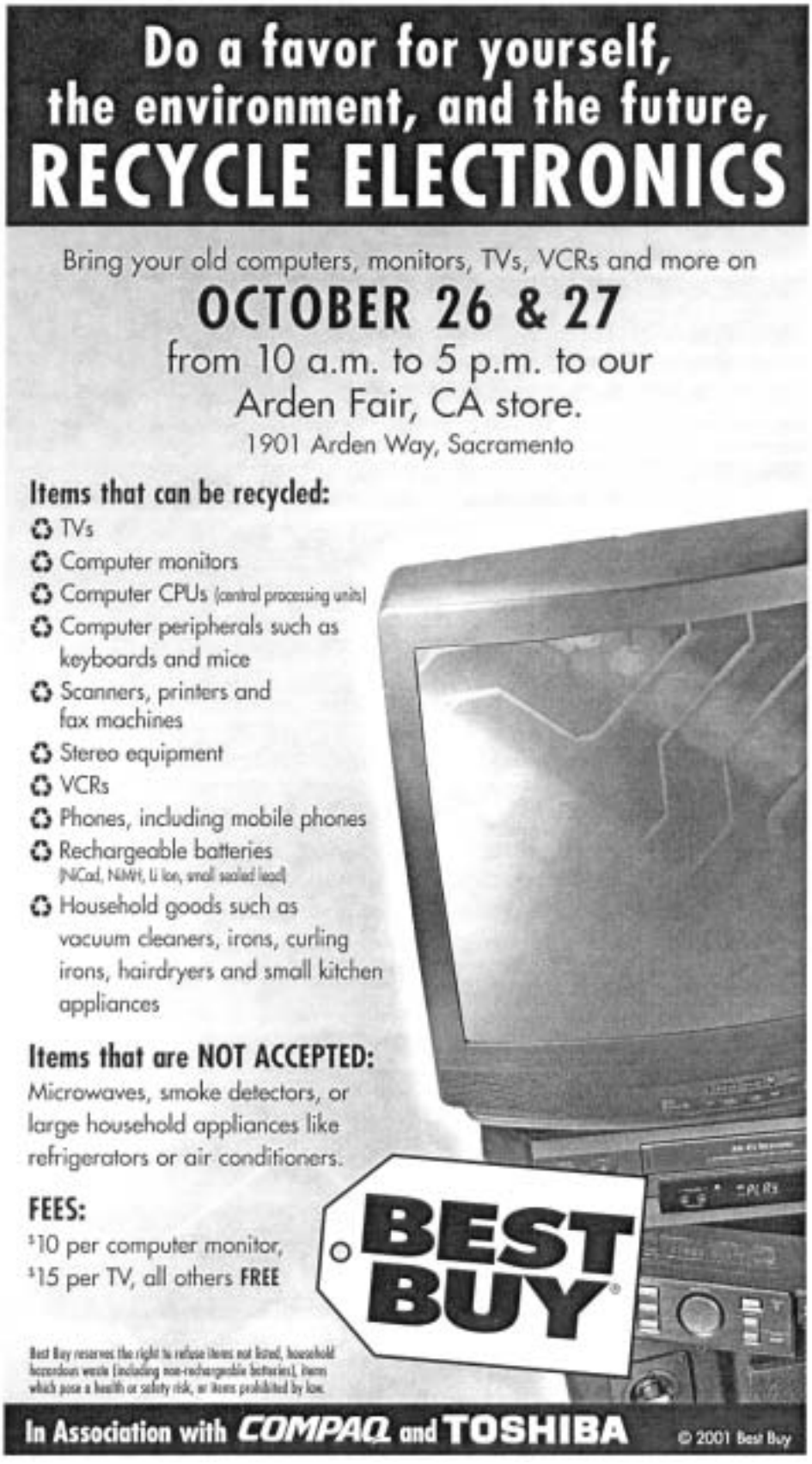
The Ericsson list of restricted substances (in products)

	Group of substances	Substance	Chemical name	CAS-number	Main area of use	Main risk
1	Metals	Antimony and its compounds		Various	Electronic equipment	Toxic
		Arsenic and its compounds except in semiconductors		Various		
		Beryllium and its compounds except in beryliumcopperalloys (<3 % Be)		Various		
		Bismuth	-	7440-69-9		Negative for recycling
		Cadmium in batteries	-	7440-43-9		Carcinogenic
		Chromium(VI)compounds	-	18540-29-9	Surface treatment	Allergenic
		Lead and its compounds	-	Various	Electronic equipment, pigments, stabilizers	Bioaccumulative
		Nickel and alloys except in steel alloys. Applicable only when in skin contact		Various	Electronic equipment	Allergenic
		Organo-tin compounds	-	Various	Stabilizers	Toxic
2	Halogenated flame retardants	TBBA, reactive or additive	Tetrabromobisphenol-A	79-94-7	Printed boards	Bioaccumulative
		All others	-	Various	Plastics	
3	Halogenated hydrocarbons	FCs - fluorocarbons	-	Various	Coolants	Global warming potential
		HCFCs- chlorofluorohydrocarbons		Various		Ozone depletion
		HFCs - fluorohydrocarbons except coolants		Various	Solvents	Global warming potential
4	Organic compounds	Azo compounds with carcinogenic amino compounds		Various	LCDs, plastics	Carcinogenic
		-	Formaldehyde	50-00-0	Preservatives	Allergenic
5	Plasticisers	Phthalates	Various	Various	Polyvinylchloride (PVC)	Bioaccumulative, ecotoxic
6	Polymers	Halogenated polymers except PVC in power cables		Various	Electronic and mechanical equipment	Corrosion and/or risk of formation of halogenated dibenzodioxins and -furans at uncontrolled fire

The Ericsson list of restricted substances (in production)

	Group of substances	Substance	Chemical name	CAS-number	Main area of use	Main risk
1	Halogenated hydrocarbons	FCs - fluorocarbons		Various	Coolants	Global warming potential
		HCFCs- chlorofluorohydrocarbons		Various		Ozone depletion
		HFCs - fluorohydrocarbons except coolants		Various	Solvents	Global warming potential
		Perchloroethylene	Tetrachloroethylene	127-18-4		Carcinogenic
		-	Trichloroethylene	79-01-6		
2	Organic compounds	EDTA	Ethylenediaminetetraaceteic acid	64-02-8	Complexing agent	Bioaccumulative

Appendix D: Advertisement for Best Buy's Take-Back Program



Appendix E: National Electronics Product Stewardship Initiative (NEPSI) Members

NATIONAL ELECTRONICS PRODUCT STEWARDSHIP INITIATIVE

Stakeholders for the NEPSI Process as of November 2001 include:

GOVERNMENTS

1. Mike Paparian (916-341-6035), Board Member, California Integrated Waste Management Board/California EPA; or Mark Kennedy (916-341-6033), Technical Advisor to Board Member Paparian, CIWMB; or Peggy Harris (916-324-7663), State Regulatory Program Division Chief Department of Toxic Substance Control, California EPA
2. Raoul Clarke (850-921-9216), Environmental Administrator, Division of Waste Management, or Jack Price (850-921-9218), Environmental Manager, Florida Department of Environmental Protection
3. Liz Christiansen, Division Administrator, Waste Management Division, Iowa Department of Natural Resources, or Merry Rankin, Iowa Department of Natural Resources
4. Gina McCarthy (617-626-1040), Assistant Secretary, Massachusetts Executive Office of Environmental Affairs, or Greg Cooper, Mass. Department of Env. Protection
5. Sherry Enzler (651-215-0263), Director, Minnesota Office of Environmental Assistance; or Maureen Hickman (651-215-0271), MOEA
6. Jim Hull (573-526-3902), Director, Solid Waste Management Program, Missouri Department of Natural Resources
7. Frank Coolick (609-633-1418) or Guy Watson, Division of Solid and Hazardous Waste, New Jersey Department of Environmental Protection
8. Jan Whitworth, (503-229-6434) or Abby Boudouris (503-229-6108), Oregon Department of Environmental Quality
9. Ted Campbell (803-737-0477), South Carolina Department of Commerce; or William Culler, Director, South Carolina Department of Health and Environmental Control, Office of Solid Waste Reduction and Recycling
10. Cullen Stephenson, Director, Solid Waste and Financial Assistance Program, Washington Department of Ecology; or Chipper Hervieux (360-407-6756), WA Dept. of Ecology
11. Sego Jackson (425-388-6490), Principal Planner, Snohomish County, WA (lead); Scott Klag (503-797-1665), Senior Planner, Metro/Portland, OR (alternate)
12. Jim Kordiak (763-788-9651), Commissioner, Solid Waste Management Coordinating Board, MN; or Anne Gelbmann (651-430-6683), SWMCB
13. Clare Lindsay (703-308-7266), U.S. Environmental Protection Agency, Office of Solid Waste; Gordon Hui (703-308-9037), USEPA-OSW
14. Bill Cass (617-367-8558), Executive Director, Northeast Waste Management Officials Association
15. Scott Cassel (978-934-4855), Director, Product Stewardship Institute, University of Massachusetts/Lowell

PRODUCERS

1. Heather Bowman (703-907-7582) or Holly Evans (703-907-7576), Electronic Industries Alliance
2. David Thompson (201-271-3486), Panasonic
3. David Isaacs (202-84-7033) or Renee St. Denis (916-785-8034), Hewlett Packard
4. Charles Dolci or Cheryl Miller, Sun
5. Patti Franco (202-962-8550) or Butch Teglas (865-521-4322), Philips
6. Mark Small, or Doug Smith, Sony

7. Mario Rufino (516-328-5610), Canon
8. Ed Nevins (973-315-5161), JVC
9. George Lundberg (503-617-5607), Epson
10. Joe Johnson, Microsoft
11. David White (972-894-4156), Nokia
12. Ted Wagner (317-587-5257), Thomson Consumer Electronics
13. Joseph Burke, Dell
14. Frank Marella (201-529-9408), Sharp
15. Jennifer Shepherd (510-661-3922), Solectron

OTHER STAKEHOLDERS

1. Lynn Rubinstein (802-254-3636), Northeast Recycling Council
2. Wayne Rifer (503-644-0294) or David Stitzhal (206-723-0528), Western Electronics Product Stewardship Initiative/Northwest Product Stewardship Council
3. Ted Smith (408-287-6707), Silicon Valley Toxics Coalition, San Jose, CA
4. Shelia Davis (415-561-6530), Materials for the Future, San Francisco, CA
5. Kate Krebs (703-683-9025), National Recycling Coalition, Alexandria, VA
6. Buddy Graham (304-372-1143), Polymer Alliance Zone of West Virginia
7. Greg Vorhees, Envirocycle
8. Bette Fishbein (212-361-2400), INFORM, New York, NY
9. Jeremiah Baumann (202-546-9707), US PIRG
10. Kevin McCarthy, or Joe Aho, Waste Management, Inc.
11. Steve Skurnac (408-998-4930), Micro Metallics
12. Lisa Collins (703-264-0042), DMC Electronics Recycling
13. Julie Rhodes (317-631-5395), Reuse Development Organization, Indianapolis, IN
14. Dustin Mirick, Best Buy, Eden Prairie, MN, or Tricia Conroy, e4 Partners
15. Alan Winik or Jim Oliver, Circuit City
16. John McNabb (781-383-6202), Clean Water Action, Boston, MA
17. Reggie Caudill, New Jersey Institute of Technology
18. Margaret Walls (202-328-5092), Resources for the Future

The Center for Clean Products and Clean Technologies at the University of Tennessee is coordinating the NEPSI Dialogue. For information contact:
Gary Davis
865-974-1835
or
Catherine Wilt
865-974-1915

University of Tennessee
Center for Clean Products and Clean Technologies

Appendix F: Product Stewardship Institute Members

PRODUCT STEWARDSHIP INSTITUTE

Sustainable Solutions to Protect Our Environment

COALITION MEMBERS AND AFFILIATE MEMBERS*
OF
THE PRODUCT STEWARDSHIP INSTITUTE
January 28, 2002

State Members

- California
- Florida
- Indiana
- Iowa
- Massachusetts
- Minnesota
- Missouri
- Nebraska
- New Jersey
- North Carolina
- Oregon
- Pennsylvania
- Tennessee
- South Carolina
- Utah
- Washington
- Wisconsin
- Northeast Waste Management Officials Association – representing the views of the solid waste programs from the following NEWMOA members state agencies:
  - Connecticut
  - Maine
  - New Hampshire
  - New York
  - Rhode Island
  - Vermont

Local Members

- Sonoma County Waste Management Agency, CA
- South Shore Recycling Cooperative, MA
- Hennepin County, MN
- Solid Waste Mgt Coordinating Board, MN
- Washington County, MN
- City of Greensboro, NC
- Winston-Salem/Forsyth County, NC
- Metro, OR
- King County, WA
- Seattle, WA
- Snohomish County, WA

* Coalition Members and Affiliate Members are those state and local government agencies whose chief environmental or elected official has designated an agency point contact to work with the Product Stewardship Institute and government agencies around the country on product stewardship issues. Coalition Members pay an annual membership fee for substantial input into PSI activities, whereas Affiliate Members pay no membership fee.

University of Massachusetts/Lowell • Pinanski Hall, Room 303 • One University Avenue • Lowell, MA 01854
Telephone: (978) 934-4861 • Fax: (978) 934-3050 • www.ProductStewardshipInstitute.org

Appendix G: Massachusetts Resolution on Electronics Take-Back

RESOLUTION SUPPORTING PRODUCER TAKE BACK OF CATHODE RAY TUBES, ELECTRONICS, & HOUSEHOLD HAZARDOUS PRODUCTS

Whereas, discarded electronic products, including computer monitors, televisions, computers and others, are an increasing problem for Massachusetts cities & towns, who have to deal with more than 75,000 tons of electronic waste each year, which is expected to increase to 300,000 tons each year by 2005; and

Whereas, discarded electronic products contain lead, cadmium, mercury, hexavalent chromium, polyvinyl chloride, brominated flame retardant and other toxic materials that can pose hazards to human health and the environment when landfilled or incinerated; and

Whereas, the Commonwealth of Massachusetts, on April 1, 2000, because of the toxicity of this waste, prohibited the disposal of discarded cathode ray tubes (CRT's), such as those found in televisions and computer monitors, in municipal landfills or incinerators, which has increased local government costs for recycling discarded CRT's; and,

Whereas, Massachusetts residents generate an estimated 6 pounds per year of household hazardous products, such as paint, septic cleaners, pesticides, fingernail polish, and shoe polish, and Massachusetts cities & towns spend thousands of dollars each year for collection events to divert these household hazardous products from disposal; and

Whereas, the costs incurred by Massachusetts cities and towns for disposal of products that contain toxics and are not easily recyclable, particularly electronic products and household hazardous products, are in effect unfunded mandates imposed by the producers of such products on local taxpayers; which takes funds away from other needed local government programs, such as schools, fire protection, emergency services, and police; and

Whereas, the Massachusetts *Beyond 2000 Solid Waste Master Plan* adopted December 20, 2000, commits the Executive Office of Environmental Affairs to develop a Product Stewardship Policy that will encourage or require producers to take greater responsibility for the costs of disposing of their discarded products, but this needed state policy has not yet been adopted; and

Whereas, Producer Take Back requirements, which have been adopted in many countries across the world, will shift the burden of disposal costs for electronic and household products from local taxpayers back to the producers, internalizing these costs and giving a market incentive to design products that are durable, less toxic and recyclable; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Selectmen of the Town of _____:

1. Calls on its State Representative and State Senator to support passage of H-3154, *An act to require manufacturers to take back used cathode ray tubes*; and
2. Calls on the Legislature to develop and support legislation to require Producer Take Back for all consumer electronics products, computers, and household hazardous products; and
3. Calls on Governor Jane Swift to support H-3154, to support Producer Take Back legislation for consumer electronics, computers, and household hazardous products, to adopt a statewide Producer Take Back policy, and to adopt statewide procurement guidelines to require vendors who provide products to state and local government to take back discarded electronics and household hazardous products.