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Mr. Fareed Ferhut

Integrated Waste Management Specialist  
Buy Recycled Section  
CIWMB  
P.O. Box 4025, MS-12  
Sacramento, CA 95812

Re: Sharp's comments on EPP for printing cartridge

Dear Mr. Ferhut:

Sharp Electronics Corporation (Sharp) is pleased to have an opportunity to provide you with additional comments on the CIWMB's effort to develop Environmentally Preferable Product (EPP) standards for printer and duplication cartridges. Sharp has reviewed your most recent letter to interested parties dated September 19 2005, seeking comments on your efforts to establish the EPP standard. Based on our experience in this area, Sharp would like to offer some suggestions to your proposal.

#### Definition of "toner cartridge"

In new draft, the scope for the standard is defined as "black and colored toner cartridge only. Currently, the structure of "Toner cartridge" is categorized with 2 types, means "Toner cartridge" and "Toner container". Sharp would like to provide you with some guidance on how the JIS standard (Japan Industry standard) and the eco label in Japan called "Eco mark", utilized definitions to distinguish these two types of cartridges:

#### Toner cartridge

A Cartridge for printing composed of two or more of the followings: photo sensor, photo development unit, and toner container filled with toner for electro photographic printer, copiers, facsimile, multifunctional copier etc. (Eco mark No.132" Toner cartridge")

#### Toner container

Container that is used in the machine and to supply toner to the machine (Eco mark No.122 Printer)

The major difference between a "cartridge" and a "container" is whether it is composed of "two or more functions", or single structure. According to above definitions, a "Toner cartridge" is the combination of elements including "Drums" and "developer units", while the toner container functions solely as toner storage unit. These functional differences result in differences in recycling method and cost, calculation of recycling rate etc. According to the recent survey on Sharp and industry tells that almost of recent copier uses "toner container" Sharp would like to propose to use definition of "toner container" in the EPP.

#### Tier 1 definition of "Recycling" and "Remanufacturing"

Sharp again requests that the CIWMB look to existing terminology in Europe and Asia and develop definitions that follow those models. In the recycling regulations in both Japan and Europe, the term "Recycling" includes "Material recycling", "Thermal recycling", and "Chemical recycling". To calculate the recycling rate or to consider the method of recycling, Sharp believes that the CIWMB must provide guidance that is clearer and more consistent with existing definitions for the California definition of "Recycling".

Also for the word, "Remanufacturing", Sharp would again like to propose that there be included some criteria for some criteria guidelines about the quality and reliability level of "Remanufacturing cartridge". Sharp's proposal for quality criteria for Remanufacture is "Manufacturer must guarantee that reliability of a remanufactured cartridge is identical to that of a new product".

Tier 2 Benchmark 2 table

In this benchmark, "minimum of 50 percent recycled-content material by weight which consists of secondary and post-consumer material with at least 10 percent by weight", is required.

In the table, "30% recycled content material and 30% post consumer material" is scored "100 points" It seems that it is conflict with definition, because it is not meet the criteria of "secondary and post-consumer material with at least 10 percent". And there are other columns that cannot meet the criteria of "50 percent recycled content". Sharp would like to propose to revise this table based on the criteria.

Tier 2 Benchmark 2 "50% of recycled content material"

Sharp believes that the criteria would be higher than the quantity Sharp can collect through recycling activities. For example, Sharp 's color copier includes 4 cartridges per one machine. To get the recycled material to fulfill the requirement (50%), Sharp would be required to collect used toner cartridge not only from US market, but also for other markets around the world. Currently, major element of toner cartridge is Polystyrene (PS), but it is difficult to get this element from used cartridge, because quantity is very limited.

In some eco labels, such as "Eco mark (Japan)" and "Nordic Swan (North Europe)", the criteria for recycled content material is "over 25 gram", not a percentage of recycled content. The Blue Angel Program (Germany) requires "5% by weight". Sharp thinks that these values represent more realistic targets.

Sharp would like to propose that the required value of "Percentage of recycled content material be over 10% by weight", and "post-consumer material over 25%".

Tier 2 Benchmark 3 Remanufactured/Restored/Renovated/Repaired

Sharp thinks these values vary according to the number used in "denominator". Also, Sharp believes that clearer definitions of each method are required.

Certification

To make self-certification auditable and verifiable, Sharp believes that additional guidelines from States must be included.

Sharp appreciates having the opportunity to contribute to the EPP project and will continue to work with you to ensure it is a success.

Sincerely,



Itaru Sato  
Manager, Corporate Environmental Affairs  
Sharp Electronics Corporation