<SUPPLEMENTARY EDITION>
GUIDELINES FOR GREEN PROCUREMENT OF TELECOMMUNICATION EQUIPMENT

Revised on April, 2001

NIPPON TELEGRAPH AND TELEPHONE EAST CORPORATION
NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION

CONTENTS

1. Introduction

Nippon Telegraph and Telephone East Corporation and Nippon Telegraph and Telephone West Corporation (hereinafter collectively abbreviated by "Corporations") will promote to provide environment-friendly telecommunication equipment aiming at the development of circulation-oriented society. These Guidelines indicate the basic idea related to the green procurement of telecommunication equipment and standards regarding each particular which should be taken into consideration. The further details will be indicated in the Purchase Specifications designated by the Corporations.

2. Scope of application

These Guidelines shall be applicable to the products which the Corporations procure. The term "products" herein referred to indicates all the components, parts and materials constituting parts, units, materials (plastics, metals, rubbers, etc.), electronic parts and components, packing materials, etc. Suppliers shall present upon request of the Companies their controlling information related to the items of investigation and control.

3. Prohibition and restraint of the use of harmful substances

(This relates to the Subparagraph 4.2.1(3) Restraint of the use of harmful substances in "Green Procurement Guidelines".)

This Section prescribes the harmful substances contained in the products procured by the Corporations, and not those used in the process of manufacturing such products.

3.1 Classification of the harmful substances

The Corporations classify and control the harmful substances in the following three classes:

(1) Containment-prohibited substances: The substances whose containment in the products is prohibited.
Of the substances which obviously have harmful influence to the environment and human health and the manufacture of which is required to be prohibited by law or regulation, those which the Corporations designate.

(2) Containment-restrained substances: The substances whose containment should be restrained.
Of the substances which obviously have harmful influence to the environment and human health and are controlled by law or regulation, those which the Corporations designate taking into consideration social situations and technological trends.

(3) Voluntarily controlled substances: The substances whose containment in the products are desirable to be grasped.
Of the substances which are doubted to have harmful influence to the environment and human health, those which the Corporations designate.

3.2 Designation of harmful substances

The Table 1 designates the harmful substances. As for the lists of harmful substances, the containment-prohibited substances are designated in Table 1(1) and the containment-restrained substances are designated in Table 1(2). Although there is no indication of the voluntarily controlled substances, they shall be the substances prescribed in the government ordinance under Law concerning Reporting, etc. of Release of Specific Chemical Substances to the Environment and Promotion of the Improvement of Their Management (hereinafter abbreviated by “PRTR Law”) except for the containment-prohibited and containment-restrained substances.

Even for the substances omitted from the lists, suppliers must endeavor not to use those which have obvious harmfulness (inhalant or oral chronic toxicity, carcinogenicity, reproductive toxicity, etc.).

Table 1 Content of classification of harmful substances

Containment-prohibited substances	The Class 1 specified chemical substances as prescribed in Article 2, Paragraph 2 of Law concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances (Chemical Substances Examination Law)
	The manufacture-prohibited substances prescribed in Article 55 of Labor Safety and Hygiene Law (Safety Hygiene Law)
	The substances of which the purification standard figure of harmful substance is stipulated as "must not be detected" in Subparagraph 14-Ⅲ of Water Pollution Control Law (Water Pollution Law)
	The designated particulate prescribed in Article 2, Paragraph 5 of Air Pollution Control Law (Air Pollution Law)
	The specific substances prescribed in Article 2 of Law concerning Protection of Ozone Layer through the Control of Specified Substances and Other Measures (Ozone Layer Protection Law)
	The substances prescribed in Article 2, Paragraph 1 of Law for Special Measures to Counter Dioxins and Related Chemicals (Dioxins Law)
Containment-restrained substances	Those which are prescribed in Appendix 1 of Enforcement Regulations of Law concerning Disposal and Cleaning of Waste (Waste Cleaning Law) of the metals and chemical substances contained in specific harmful industrial waste prescribed in Article 2 - 4 of Enforcement Ordinance of Waste Cleaning Law However, in case a substance duplicates with any of the containment-prohibited substances, it is subject to the definition thereof.
	The substances prescribed in Article 2, Paragraph 3 of Law concerning Promotion of Measures to Cope with Global Warming (Global Warming Law) and Articles 1 and 2 of Enforcement Ordinance of Global Warming Law
	Substances which the Corporations designate taking into consideration the social situations and technological trends
Voluntarily controlled substances	The substances which are prescribed in the government ordinance under PRTR Law

Table 1(1) List of containment-prohibited substances

	Name of substance	Source
A-1	Polychlorinated biphenyl or PCB	Chemical Substances Examination Law Water Pollution Law
A-2	Polychlorinated naphthalene (with three or more molecules of chlorine)	Chemical Substances Examination Law
A-3	Hexachlorobenzene	
A-4	Aldoline	
A-5	Dieldrin	
A-6	Endrin	
A-7	DDT	
A-8	Chlordanes	
A-9	Bis (tributyltin) oxide	
A-9-1	N,N'-dytril-para-phenylenediamine, N-tolyl-N'-xylyl-para-phenylenediamine or N,N'-dixylil-para-phenylenediamine	
A-9-2	2,4,6-tri-tert-butylephenol	
A-10	Yellow phosphorus match	Safety Hygiene Law
A-11	Benzidine and its salts	
A-12	4-aminodiphenyl and its salts	
A-13	4-nitrodiphenyl and its salts	
A-14	Bis (chloromethyl) ether	
A-15	β-naphtylamine	
A-16	Benzene glue (5% or more benzene)	
A-17	Amianthus or asbestos	Safety Hygiene Law Air Pollution Law
A-18	Cyanides	Water Pollution Law
A-19	Organic phosphides (limited to parathion, methylparathion, methyl demeton and EPN)	
A-20	Alkyl-mercury compounds	
A-21	CFC	Ozone Layer Protection Law
A-22	Halon	
A-23	4-chloro carbon	
A-24	Trichroloethane	
A-25	HCFC	
A-26	HBFC	
A-27	Methyl bromide	
A-28	Polychlorinated dibenzofuran	Dioxins Law
A-29	Polychlorinated dibenzo-para-dioxin	
A-30	Coplaner polyhlorinated biphenyl	

Table 1(2) List of containment-restrained substances

	Name of substance	Source
B-1	Mercury or its compounds	Waste Cleaning Law
B-2	Cadmium or its compounds	
B-3	Lead or its compounds	
B-4	Organic phosphydes (except those included in the List of containment-prohibited substances)	
B-5	Hexachrome compounds	
B-6	Arsenic or its compounds	
B-7	Trichloroethylene	
B-8	Tetrachloroethylene	
B-9	Dichloromethane	
B-10	Dichloroethane	
B-11	Dichloroethylene	
B-12	Dichloropropane	
B-13	Thiuram	
B-14	Simazine	
B-15	Thiobencarb	
B-16	Benzene	
B-17	Selenium	
B-18	Carbon dioxide	Global Warming Law
B-19	Methane	
B-20	Dinitrogen oxide	
B-21	Hydrofluorocarbon which is a global warming gas	
B-22	Perfluorocarbon which is a global warming gas	
B-23	Sulfur hexafluoride	
B-24	Plastic materials containing halogenated compounds	Substances designated by the Corporations

3.3 Control of containment of harmful substances

The suppliers shall control the results of investigation on the containment, etc. regarding the containment-prohibited and containment-restrained substances included in the products and present the controlling information upon request of the Corporations.
The controlling information shall include in principle the information specified in Table 2.
Also, it is desirable that the suppliers control the results of investigation on the containment, etc. regarding the voluntarily controlled substances included in the products.

- Basic information: Information to be controlled with regard to the containment-prohibited and containment-restrained substances. Suppliers shall present the controlling information upon request of the Corporations.
- Primary information: Information to be controlled with regard to the containment-restrained substances. Suppliers shall present the controlling information upon request of the Corporations.
- Secondary information: Information to be controlled with regard to the containment-restrained substances. Suppliers shall present the controlling information upon additional request of the Corporations.

Table 2.

	Controlling information	Containment-prohibited substances	Containment-restrained substances	Voluntarily controlled substances
Basic information	・ Existence or non-existence of containment of harmful substances	○	○	Voluntary control
Primary information	・ Density of harmful substances contained ・ Quantity of harmful substance used (contained) per piece (or unit) of product ・ Purpose and site of use of the harmful substance		○	Voluntary control
Secondary information	・ Possibility for the harmful substance to leak into the environment during the period of the use (operation) and at the time of the disuse of the product ・ Method to separate the site of the use of the harmful substance ・ Method to recycle and disuse ・ Method to restrain the use of the harmful substance (existence or non-existence of alternative substance)		○	Voluntary control

(Reference: Example of indication of information)

Specifications No.		Name of specifications	
Product name			
Remarks			

Classification	No.	Name of substance	Containment (Yes/No)	Density of containment (Note 1)	Mass of containment (Note 1)	Use of containment Part of containment	Remarks
Containment-prohibited substance	A-1	Polychlorinated biphenyl or PCB	No				
	A-2	Polychlorinated naphthalene (with three or more molecules of chlorine)	No				
	A-3	Hexachlorobenzene	No				
	A-4	Aldoline	No				
	…	…	…				

Containment-restrained substance	B-1	Mercury or its compounds	No				
	B-2	Cadmium or its compounds	Yes	×××	×××	Ni-Cd battery	
				×××	×××	Paints	
	B-3	Lead or its compounds	Yes	×××	×××	Solder (Note 2)	
				×××	×××	Used as a stabilizer for coverings (PVC) of wiring cables	
	…	…	…				
	B-24	Plastics material containing halogenated compounds	Yes	×××	×××	Coverings (PVC) of wiring cables	
				×××	×××	Used as a flame retarder for casings (ABS)	
	…	…	…				

Note 1: Total mass contained per unit of the product, to be calculated from contained mass = contained density x volume, etc. The containment shall be determined by the PPM level and both contained density and contained mass shall be in two digits of significant figures.

Note 2: In case where measurement of the quantity of solder used per unit of the product is difficult, calculations by presumption are acceptable provided that the bases of calculations are noted in remarks, etc.
(Example) Quantity of solder used per month x presumed yield rate x density rate of lead / number of units produced per month

3.4 Restraint of the use of specified substances

3.4.1 Restraint of the use of lead contained in solder

Lead-free solder should be used as far as possible for the products delivered to the Corporation. Also, lead-free solder should be used as far as possible for the electrode terminals of the parts and inside of the parts.
Suppliers shall investigate and control lead contained in solder used for their products.

3.4.2 Restraint of the use of polychlorinated vinyl

The use of polychlorinated vinyl shall be restrained as far as possible until a system of detoxification disposal is established by a method of disposal at the time of the disuse of the product, from the viewpoint of restraining the use of substances which have possibility of affecting human body or environment.
Suppliers shall investigate and control the site and quantity of the use of polychlorinated vinyl used for all the parts and materials used for their products.

3.4.3 Restraint of the use of halogen-related flame retarders

The use of halogen-related flame retarders other than non-decabro flame retarders for plastics materials should be restrained as far as possible.
Suppliers shall investigate and control the site and class of flame retarders used for the structural parts including casings used for their products.

4. Unification / selection of plastics materials

(This relates to Subparagraphs 4.2.1(1) Unification of materials and (2) Selection of materials in “Green Procurement Guidelines”)

4.1 Recommended plastics materials

When suppliers conform with the technological specifications presented by the Corporations, they shall select as materials for their products as far as possible from among the following four classes of plastics materials:

- Polyethylene
- Polypropylene
- Polystyrene
- Polyester

4.2 Grade and unification of colors

When suppliers conform with the technological specifications presented by the Corporations in order to realize more stabilized and efficient recycling of the materials, they must strive to unify not only the materials but also the grades and colors of plastics materials used for their products as far as possible.

4.3 Method of processing to be avoided

When suppliers conform with the technological specifications presented by the Corporations in order to realize more stabilized and efficient recycling of the materials, they shall not use as far as possible any of the following treatment processes for the plastics materials used for their products:

- Painting or plating over the surface of plastics
- Pasting of a label unless the label has a mutual solubility with the base plastics material and the recycling of the material can be realized without removing the label
- Mixing of fillers including reinforced glass

4.4 Control of the use of plastics materials

Suppliers shall control classes, material grades, colors, processing methods of plastics materials used for the structural parts including casings.

5. Selection of the other materials

5.1 Selection of metal materials

When suppliers conform with the technological specifications presented by the Corporations, they shall select as far as possible metals used for the structural parts including casings from among the following:

- Cold-stripped steel sheets or belts
- Cold-stripped stainless steel sheets or belts

・ Aluminum and aluminum-alloy sheets and stripes

Suppliers shall control the classes and processing methods, etc. including plating, transforming and painting treatments of metal materials used for structural parts such as casings.

5.2 Selection of paper and similar materials

When suppliers conform with the technological specifications presented by the Corporations, they shall observe the following rules in selecting paper and similar materials:

(1) In order to reduce the use of wood pulp, suppliers shall select paper whose composition rate of used paper is as high as possible and paper and similar materials made from materials other than wood, such as kenaf.

(2) Suppliers shall select paper and similar materials which are free from such chemicals as bleaches and fluorescent whiteners as far as possible.

(3) Suppliers shall select paper and similar materials with as little surface coating as possible.

Suppliers shall investigate and control the classes and quantity of the harmful substances contained in paper and similar materials used for their products.

5.3 Selection of printing ink

When suppliers conform with the technological specifications presented by the Corporations, they shall use as far as possible non-petroleum solvent ink such as soy oil ink.

The substances contained in the printing ink shall conform with the standards prescribed in Section 3. “Prohibition and restraint of the use of harmful substances”.

Suppliers shall investigate and control the classes and quantity of the harmful substances contained in the printing ink used for their products.

6. Saving of resources

(This relates to Subparagraph 4.2.2 Saving of resources in “Green Procurement Guidelines”)

In consideration of the draining of the resources, the suppliers should design such products as those enabling effective use of the resources.

6.1 The use of recycled materials

Suppliers shall use as much recycled materials as possible for their products.

6.2 Reduction of volume

Suppliers should avoid superfluous design in mass, cubature, number of parts and materials and implement appropriate design of their products with the minimum necessary amount of resources.

6.3 Extension of longevity

In order to effectively utilize the limited resources, suppliers should design their products so that those will be durable, require replacement of minimum number of units for the improvement of their functions and performance and have structures that enable easy repair at the time of a failure.

7. Recycling

(This relates to Paragraph 4.3 Recycling and the method of disuse in “Green Procurement Guidelines”)

7.1 The designs enabling recycling

Suppliers should strive to reuse the resources by effectively recycling used products and implement the designs enabling to save the resources by recycling and reduce the volume of disused products.

7.2 Easiness in disassembly

The products shall have structures enabling easy disassembly into reusable parts and recyclable materials as far as possible.

7.3 Easiness in the disuse disposal

Suppliers shall design their products considering that those will not affect as far as possible the disposing facilities and environment surrounding the facilities when the products (including their packing materials) are tentatively and finally disposed.

8. Indication

(This relates to Subparagraphs 4.2.4 Indication and 4.2.6(3) Indication in “Green Procurement Guidelines”)

8.1 Indication of the name of materials

Suppliers shall indicate in principle the mark implying the name of material on the parts made of plastics in order to facilitate the recycling and disuse disposals.

8.2 Indication of the name of products

Suppliers shall select the method of indicating the product name on the casings of products to be delivered by them that will not hinder the recycling of the material and would not be defaced (or peeled off) easily.

9. Material and method of packing

Suppliers should use the minimum necessary amount of packing materials, reduce the amount of polystyrene foam, which is mainly used as shock-absorber, and indicate the name of packing materials in accordance with Law to Promote the Effective Use of Resources. Suppliers shall control the quality and quantity of materials used in packing their products.

10. Energy saving

(This relates to Subparagraph 4.2.5 Energy saving in ”Green Procurement Guidelines”.)

10.1 Design enabling the energy saving

Suppliers should implement the designs which enable the energy saving.

10.2 Performance based on laws

(1) The specified equipment as designated in “Law concerning

Rationalization of Use of Energy" shall have performance conforming with the said law.

(2) The products subject to the International Energy Star Program shall have performance conforming with it.

11. Other

The particulars not specifically prescribed in these Guidelines shall be governed by "NTT Group Green Procurement Guidelines".
These Guidelines will be amended from time to time as occasions may require in accordance with the changes in the social conditions and from the new viewpoints.

These Guidelines shall be applicable to the following companies:

Nippon Telegraph and Telephone East Corporation
Nippon Telegraph and Telephone West Corporation