Criteria for distinguishing import and export of electrical and electronic waste (e-waste) subject to control under the Japanese Basel Act

1. Objective

The amount of electrical and electronic waste (e-waste) is increasing every year globally. However, environmentally sound recycling has not kept pace, and there are cases where improper treatment practices are taking place in many countries, such as those in Africa. Health hazards and environmental impacts can be caused not only by hazardous e-waste, but also by non-hazardous e-waste if not treated in an environmentally sound manner. Therefore, many developing countries have pointed out the need to regulate not only hazardous but also non-hazardous e-waste under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (hereinafter referred to as the "Basel Convention").

In response to this, at the fifteenth meeting of the Conference of the Parties (COP15) to the Basel Convention held on June 2022, it was decided to amend the annexes to the Convention, making non-hazardous e-waste subject to control under the Convention. Starting from January 1, 2025, when the amended annexes come into effect, prior-informed consent from the importing country will, in principle, be required for the export of all e-waste, including non-hazardous e-waste.

Furthermore, following this decision, OECD had discussion on the regulatory framework of e-waste under the "Decision of the Council on the Control of Transboundary Movements of Wastes Destined for Recovery Operations". As consensus has not been reached, the amendments to the OECD Council Decision (OECD/LEGAL/0266) adopted by the OECD Environment Policy Committee (EPOC) on April 5, 2024, stipulates that each country retains its right to determine the regulatory framework of specific types of e-waste—such as "electrical assemblies consisting only of metals or alloys (GC010)" and "electronic scrap (e.g. printed circuit boards, electronic components, wire, etc.) and reclaimed electronic components suitable for base and precious metal recovery (GC020)"— in conformity with its domestic legislation and international law.

Scope of non-hazardous e-waste subject to control under the Convention will be determined according to each country's interpretation. The purpose of the criteria is to enable the appropriate determination of whether the e-waste in question falls under regulatory control when exporting or importing e-waste in accordance with the Basel Convention and Japanese Basel Act ("Act for the Control of Export and Import of Specified Hazardous and Other Wastes"), which ensures provisions of the Convention in Japan.

2. Effective date of the criteria

The criteria will apply to import and export of e-waste to be conducted on or after January 1, 2025. Additionally, the criteria will be amended as needed, with due consideration of import and export regulation of e-waste in other countries.

3. e-waste subject to the distinguishing criteria

COP15 adopted the decision to amend the following annexes relevant to e-waste:

(1) the creation of a new entry (A1181) to clarify the existing hazardous e-waste category (A1180),

(2) the creation of a new entry (Y49) for non-hazardous e-waste newly subject to control,

(3) the deletion of e-waste related entries which were previously not subject to control (B1110 and B4030).

Additionally, for both (1) hazardous e-waste and (2) non-hazardous e-waste, the concept of e-waste subject to control under the Convention has been clarified into 3 (three) subcategories as follows:

- Waste electrical and electronic **equipment** (hereinafter referred to as “equipment”),
- Waste **components** of “equipment”, (hereinafter referred to as “components”) and
- Waste arising from processing of “equipment” or “components” (hereinafter referred to as “**fractions**” or “**shredded materials**”).

For (1) hazardous e-waste, it has been subject to control from before, allowing determinations to continue in the same manner.

On the other hand, for (2) non-hazardous e-waste, the specific items that fall under Y49 will be subject to each country's interpretation. The criteria aim to define the scope of non-hazardous e-waste to be regulated.

(Reference) Scope of Electrical and Electronic Waste under the Japanese Basel Act

In Japan, e-waste under the Japanese Basel Act refers to the following types of waste listed in the Ministerial Order, which defines the scope of specified hazardous wastes.

- UPS (Uninterruptible Power Supply) equipment
- Items containing the following components - storage batteries and other batteries, mercury switches, cathode-ray tubes and other similar glass or capacitors (containing PCBs), and items containing hazardous substances listed in the

Ministerial Order

- Existing home appliances (4 items) and small electrical appliances (28 items)
- Water heaters and distribution boards
- Air compressors with cooling systems

These electrical and electronic equipment (EEE) items are, in principle, classified as hazardous e-waste (A1181). However, with the exception of the items in the second bullet, if these EEEs are broken down to their smallest units for component analysis, and none of the components contain any hazardous substances listed in the Ministerial Order, then they will not fall under A1181 but will instead be classified as Y49 (non-hazardous e-waste). The approach to components and shredded material is explained below.

4. Criteria for distinguishing e-waste subject to control

A) Hazardous e-waste (A1181)

As mentioned above, hazardous e-waste (A1181) has been already subject to control, and the current criteria for determination will continue to be applied. For reference, the existing criteria for distinguishing whether specific e-waste (equipment etc.) are subject to control are outlined below.

(1). Equipment

Equipment already subject to control are the four existing home appliances, 28 small appliances, and four commercial appliances (water heaters, distribution boards, uninterruptible power supplies (A1160) and air compressors with cooling systems (A3020)), listed in the Ministerial Order.

If all the parts of the equipment are analyzed for their constituent elements at the smallest possible disassembled unit and none of them contain any of the hazardous substances listed in the Ministerial Order, they do not fall under A1181. However, it needs to be subject to control as Y49.

In addition, equipment falling under the second bullet is subject to control as A1181.

(2). Component

Equipment already subject to control are the four existing home appliances, 28 small appliances, and four commercial appliances (water heaters, distribution boards, uninterruptible power supplies (A1160) and air compressors with cooling systems (A3020) listed in the Ministerial Order; and their components are also subject to control. If all the components are analyzed for their constituent elements at the smallest possible disassembled unit and none of them contain any of the hazardous substances listed in the Ministerial Order, they do not fall under A1181. However, it needs to be subject to

control as Y49.

Waste that falls under other Annex VIII entries is not covered by A1181, but rather by the respective relevant entry.

For the following two components, listed as “certain” in the revised Annex A1181 code, the following criteria are applied for determination.

a) Circuit boards

GC010 and GC020, specified in the Ministerial Order, remain not subject to control when exported to the OECD member countries for the purpose of recycling or imported from any country, regardless of whether the exporting country is an OECD member.

As mentioned above, import/export control of GC010 and GC020 may vary among OECD member countries. The OECD Secretariat is expected to compile information on each country’s import/export regulation and make it publicly available after January 15, 2025.

b) Display devices

Display and other electrical appliances for visual display has been already subject to control in the Ministerial Order.

(3). Shredded material

Equipment already subject to control are the four existing home appliances, 28 small appliances, and four commercial appliances (water heaters, distribution boards, uninterruptible power supplies (A1160) and air compressors with cooling systems (A3020), listed in the Ministerial Order); and their shredded material are also subject to control.

Shredded printed circuit boards falling under GC010 and GC020 are not subject to control when exported to OECD member countries for the purpose of recycling or imported from any country (regardless of OECD member status). This is similar to the control of components.

1) Non-hazardous e-waste (Y49)

For non-hazardous e-waste (Y49) newly subject to control under the Convention, the criteria will be established to determine which specific equipment, components, and factions are applicable, with consideration of differences in processing capabilities and concerns of improper disposal of residue arising from processing in the country of destination.

(1). Equipment

Among the four household appliances, 28 small electrical items, and four types of commercial equipment, those that have been analyzed at the smallest disassembled units and found to contain no hazardous substances listed in the Ministerial Order will be classified as Y49.

(2). Component

The scope of Y49 components is defined as "excluding those included in other items of Annex II or other items of Annex IX." Consequently, items classified under Y46 to Y48 are not part of Y49. Furthermore, components categorized under other non-hazardous waste categories are also excluded from Y49.

Among the four household appliances, 28 small electrical items, and four types of commercial equipment, components that have been analyzed down to the smallest disassembled unit and found to contain no hazardous substances listed in the Ministerial Order will be classified as Y49.

a) Circuit boards

GC010 and GC020 remain not subject to control when exported to OECD member countries for the purpose of recycling or imported from all countries.

As mentioned above, import/export control of GC010 and GC020 may vary among OECD member countries. The OECD Secretariat is expected to compile information on each country’s import/export control on e-waste and make it publicly available.

b) Display devices

Display devices whose components have been analyzed down to the smallest disassembled unit and found to contain no hazardous substances listed in the Ministerial Order will be classified as Y49.

c) Batteries

Items classified under Y49 are described as "excluding those covered by other items in Annex II or Annex IX," so attention should be given to the relationship with the existing battery entry A1170 in Annex VIII and B1090 in Annex IX.

Items covered under A1170 include not only unsorted batteries, but also cadmium, mercury, and lead storage batteries. Therefore, for battery waste collected from the public—where there is a risk of various types of batteries being mixed—objective proof is required to show that the waste does not contain cadmium, mercury, or lead. If such

proof cannot be provided, the waste will be classified as unsorted batteries under A1170.

"Sorted battery scrap (excluding defective batteries)" is classified as B1090. Therefore, if the conditions are met, the batteries would fall under B1090 and not be classified under Y49.

Batteries found in e-waste components include not only those mentioned above, such as cadmium, mercury, and lead, but also lithium-ion batteries and nickel-metal hydride batteries. e-waste containing these batteries, provided it does not include hazardous substances listed in the Ministerial Order, will be classified as Y49.

d) Cooling compressors (black motors) with oil removed

Until now, cooling compressors have been subject to control based on the Ministerial Order. They are determined to be subject to control if they are "air compressors (limited to those with cooling devices) that contain mineral oil or are unsuitable for their originally intended use." Compressors from which the mineral oil has been removed have been considered non-hazardous and are not subject to control.

However, following the amendment of the Basel Convention Annex on e-waste, cooling compressors, including non-hazardous cooling compressors from which mineral oil has been removed, will be subject to control under Y49.

Cooling compressors that have been cut after the mineral oil has been drained and the motor core has been removed and disassembled, and those that fall under the category of metal scrap (B1010), will not be subject to control.

e) Transformers with mineral oil removed

Transformers have been regulated based on the Ministerial Order. Transformers from which the mineral oil has been removed have been classified as non-hazardous and thus were not subject to control.

However, following the amendment of the Annex, transformers from which the mineral oil has been removed will be subject to control under Y49.

(3). Shredded material

If the shredded material contains circuit boards, it will be classified as A1181 unless it can be demonstrated that the circuit boards do not contain any hazardous substances listed in the Ministerial Order; if proof is provided, it will be classified as Y49. However, if the material is to be exported to OECD member countries or imported from any country, it will not be subject to control if it falls under GC020 of the Ministerial Order.

Additionally, if there is a significant amount of plastic waste mixed in with the shredded materials, it is necessary to determine whether it falls under plastic-related categories

(Y48, A3210, B3011).

(Reference) Criteria for the determination of whether Shredded Materials are subject to control

This section will clarify the distinction between mixed scrap already subject to control and the metal scrap and shredded scrap not subject to control.

Shredded and sorted used electrical appliances that have been adjusted to a quality suitable for direct input as raw materials into furnaces will be considered metal scrap not subject to control and hence will not be classified as Y49.

For example, electrical appliances often contain materials like iron, copper, and aluminum. After manual disassembly, mechanical shredding, and physical separation processes (such as magnetic, air, and buoyant sorting), if the resulting scrap reaches a sufficiently homogeneous state for each type of metal or alloy, with no foreign substances present, it will be classified as B1010—"Scrap metal (limited to non-dispersible metallic forms)"—and thus not subject to control.

The term "shredded material" refers to material that has been processed through a shredder until it is approximately 10 cm or smaller.

If the shredded material is sorted and adjusted to a sufficiently homogeneous state, it will be classified as B1050—"Scrap metal consisting of mixture of non-ferrous metal "—and thus not subject to control.

If it contains hazardous substances listed in the Ministerial Order, it will be subject to control under the Convention.

＜Examples of criteria for determining whether shredded materials are subject to control＞

Not subject to control	Not subject to control	Subject to control
Metal scrap Materials that have undergone multiple mechanical sorting processes, achieving a sufficiently homogeneous state and adjusted to a quality suitable for direct input as raw materials into furnaces.	**Metal Scrap shredder** Materials that have undergone multiple mechanical sorting processes and manual sorting, achieving a sufficiently homogeneous state, with a size of approximately 10 cm or smaller (Twitch may fall under this category*).	**Mixed scrap** Items that contain a mixture of materials and foreign substances (Zorba may fall under this category**).
		
Classified as B1010	Classified as B1050	Classified as Y49 or A1181***

*: Twitch: High-quality aluminum mixed metal

**: Zorba: A mixture of aluminum-based mixed metal, copper, circuit boards, zinc, and other materials. The actual material may also include resin, batteries, and similar items.

***: If the material is to be exported to OECD member countries or imported from any country, it will not be subject to control if it falls under GC020 of the Ministerial Order.