General Office of Ministry of Environmental Protection of the People's Republic of China

Extremely urgent HuanBanTuRangHan (2017) No. 1292

Letter for Soliciting Comments on Environmental Protection Control Standards for Imported Solid Wastes as Raw Materials (Draft for Comments)

Various relevant institutions:

To enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes* and the *Circular of General Office of the State Council on Issuing the Implementation Plan for Prohibiting the Entry of Foreign Garbage and Advancing the Reform of Solid Waste Import Administration System* (GuoFaBan (2017) No.70), we decide to revise the *Environmental Protection Control Standards for Imported Solid Wastes as Raw Materials* (GB 16487.1-13- 2005). The draft for comments for standard revision and its drafting notes are hereby issued to you. Please review them and submit written comments to us by August 25, 2017 via mail or E-mail (please send electronic documents to the E-mail box of the contact person). Failure to submit feedback within the specified period will be deemed as having no comment. You may login the "Comment Solicitation" section at our website (http://www.mep.gov.cn/) to search and view the draft for comments for standard revision and its drafting notes.

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Annexes: 1. List of institutions for soliciting comments
2. Environmental Protection Control Standards for Imported Solid Wastes as Raw Materials (Draft for Comments)
3. Drafting Notes on *Environmental Protection Control Standards for Imported Solid Wastes as Raw Materials (Draft for Comments)*

Ministry of Environmental Protection (Seal)
General Office of Ministry of
Environmental Protection
August 10, 2017

Annex 1

List of Institutions for Soliciting Comments

1. General Office of National Development and Reform Commission
2. General Office of Ministry of Industry and Information Technology
3. General Office of Ministry of Commerce
4. General Office of General Administration of Customs
5. General Office of General Administration of Quality Supervision, Inspection and Quarantine
6 Department (Bureau) of Environmental Protection of various provinces, autonomous regions and direct-controlled municipalities
7. Chinese Research Academy of Environmental Sciences
8. China National Environmental Monitoring Center
9. Sino-Japan Friendship Center for Environmental Protection
10. Foreign Economic Cooperation Office of Ministry of Environmental Protection
11. Chinese Academy for Environmental Planning of Ministry of Environmental Protection
12. Appraisal Center for Environment and Engineering of Ministry of Environmental Protection
13. Solid Wastes and Chemicals Management Center of Ministry of Environmental Protection
14. Nanjing Institute of Environmental Sciences of Ministry of Environmental Protection
15. South China Institute of Environmental Sciences of Ministry of Environmental Protection
16. Chinese Society for Environmental Sciences
17. China Association of Environmental Protection Industry
18. Environmental Standard Institute of Ministry of Environmental Protection
19. China Certification and Inspection (Group) Co., Ltd.

20. China Nonferrous Metals Industry Association
21. China Association of Automobile Manufacturers
22. China Paper Association
23. Plastic Recycling Chapter of China Synthetic Resin Supply and Sales Association
24. China Association of Metal Scrap Utilization
25. China National Ship Recycling Association

(We'd like to solicit comments from the following departments within the Ministry of Environmental Protection: General Office, Department of Planning, Department of Policies, Laws and Regulations, Department of Science and Technology, Department of Environmental Impact Assessment, Department of Environmental Monitoring, Department of Water Environment Management, Department of Air Environment Management, Department of Nuclear Facility Safety Regulation, Department of Nuclear Power Safety Supervision and Management, Department of Radioactive Sources Safety Supervision and Management, Bureau of Environmental Supervision, Supervision Office, Emergency Response Center)

Environmental Protection Standards for Solid Waste Imports that can be Used as Raw Materials

(GB 16487.1~13-2005)

(Draft)

Standard Compilation Group
August 2017

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ICS 13.030.50
Z 70

National Standards of the People's Republic of China

GB 16487.2—2017

Replaces **GB 16487.2—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials – Smelt Slag

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Preface

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, control environmental pollution due to imported smelt slag as raw material and standardize examination and approval for import of solid wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported smelt slag.

This standard is one of a series of environmental protection control standards for imported solid wastes and applies to the import management of smelt slag under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 1996, initially revised in 2005, and this is the second revision. Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported smelt slag was added;
--- requirement on prohibition of import of vanadium-containing slag, ash and residue was added;
--- control requirement for hazardous wastes was adjusted;
--- control requirement for regular carried wastes was tightened.

Environmental Protection Control Standard for Imported Solid Wastes- Smelt Slag (GB 16487.2-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection.

Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Smelt slag

1 Scope of application

This standard specifies the environmental protection and control requirements for imported smelt slag.

This standard applies to the import management of smelt slag with the following harmonized system codes:

Harmonized System Code	Name of solid waste
2618001001	Manganese-containing granular slag generated during smelting of steel and iron, with a manganese content greater than 25% (including slag sand)
2619000010	Oxide scale generated during steel rolling
2619000030	Steel and iron residue generated during smelting of steel and iron, with an iron content greater than 80%

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 5085.1	Identification standards for hazardous wastes -	Corrosivity
GB 5085.2	Identification standards for hazardous wastes -	Screening test for acute toxicity
GB 5085.3	Identification standards for hazardous wastes -	Leaching toxicity
GB 5085.4	Identification standards for hazardous wastes -	Flammability
GB 5085.5	Identification standards for hazardous wastes -	Reactivity
GB 5085.6	Identification standards for hazardous wastes -	Identification for toxic substance content
SN/T0570	Inspection procedures for radioactive contamination of imported wastes as raw materials	
SN/T1791.10	Inspection and quarantine procedures for imported wastes as raw materials- Part 10: smelt slag	

National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Carried waste

Foreign substances introduced into imported smelt slag during production, collection, packaging and transportation (excluding packing material for imported smelt slag and other substances required for transportation).

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported smelt slag, the following requirements shall be met:

a) imported smelt slag shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for smelt slag (including packing material) shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of smelt slag shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) The specific activity of radioactive nuclide in smelt slag shall be less than the threshold value listed in Table 1.

Table 1 Threshold Value of Specific Activity of Radioactive Nuclide

Nuclide	Specific Activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Smelt slag shall not contain explosive weaponry and ammunition, such as scrapped bomb, cannonball.

4.3 It's forbidden to import vanadium-containing slag, ash and residue, including spent catalyst containing vanadium.

4.4 The total weight of the following carried wastes in smelt slag shall be strictly restricted to a level not greater than 0.01% of the weight of the imported smelt slag.

a) sealed container;

b) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

c) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.5 In addition to the wastes listed above, the total weight of other carried wastes (including wooden waste, waste paper, waste plastic, waste rubber, waste glass, spent catalyst) in smelt slag shall be restricted to a level not greater than 0.3% of the weight of the imported smelt slag.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.

5.2 Items in section 4.4b) and 4.4c) herein shall be inspected according to the methods of GB5085.1-GB5085.6.

5.3 Other items herein shall be inspected according to SN/T1791.10.

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National Standards of the People's Republic of China

GB 16487.3—2017

Replaces **GB 16487.3—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials – Wood and wood articles waste

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Introduction

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, and control environmental pollution due to imported wood and wood article wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported wood wastes.

This standard is one of a series of environmental protection control standards for imported solid wastes and applies to the import management of wood wastes under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 1996, initially revised in 2005, and this is the second revision.
Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported wood wastes was added;
--- control requirement for hazardous wastes was adjusted;
--- control requirement for regular carried wastes was tightened.

Environmental Protection Control Standard for Imported Solid Wastes- Wood wastes (GB 16487.3-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection.
Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Wood and wood article wastes

1 Scope of application

This standard specifies the environmental protection and control requirements for imported wood and wood article wastes (hereinafter referred to as "wood waste").

This standard applies to the import management of wood wastes with the following harmonized system codes:

Harmonized System Code	Name of solid waste
4401310000	Wood pellet
4401390000	Other sawdust, wood waste and scrap
4501901000	Cork waste

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 5085.1 Identification standards for hazardous wastes - Corrosivity
GB 5085.2 Identification standards for hazardous wastes - Screening test for acute toxicity
GB 5085.3 Identification standards for hazardous wastes - Leaching toxicity
GB 5085.4 Identification standards for hazardous wastes - Flammability
GB 5085.5 Identification standards for hazardous wastes - Reactivity
GB 5085.6 Identification standards for hazardous wastes - Identification for toxic substance content
SN/T0570 Inspection procedures for radioactive contamination of imported wastes as raw materials
SN/T1791.3 Inspection and quarantine procedures for imported wastes as raw materials - Part 3: wood and wood article wastes
National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Carried waste

Foreign substances introduced into imported wood wastes during production, collection, packaging and transportation (excluding packing material for imported wood wastes and other substances required for transportation).

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported wood waste, the following requirements shall be met:

a) imported wood wastes shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for wood waste (including packing material) shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of wood waste shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) the specific activity of radioactive nuclide in wood waste shall be less than the threshold value listed in Table 1.

Table 1 Threshold Values of Specific Activity of Radioactive Nuclide

Nuclide	Specific activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Wood waste shall not contain explosive weaponry and ammunition, such as scrapped bomb, cannonball.

4.3 The total weight of the following carried wastes in wood waste shall be strictly restricted to a level not greater than 0.01% of the weight of the imported wood waste.

a) sealed container;

b) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

c) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.4 In addition to the wastes listed above, the total weight of other carried wastes (including waste metal, waste paper, waste plastic, waste glass, waste rubber, powdery material, severely corroded wooden material) in wood waste shall be restricted to a level not greater than 0.3% of the weight of the imported wood waste.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.

5.2 Items in section 4.3b) and 4.3c) herein shall be inspected according to the methods of GB5085.1-GB5085.6.

5.3 Other items herein shall be inspected according to SN/T1791.3.

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National Standards of the People's Republic of China

GB 16487.4—2017

Replaces **GB 16487.4—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials – Waste and scrap of paper or paperboard

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Preface

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, control environmental pollution due to imported waste and scrap of paper or paperboard as raw material and standardize examination and approval for import of solid wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported waste and scrap of paper or paperboard.

This standard is one of a series of environmental protection control standards for imported solid wastes and applies to the import management of waste and scrap of paper or paperboard under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 1996, initially revised in 2005, and this is the second revision.

Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported waste paper was added;
--- requirement on prohibition of import of unsorted, mixed waste paper was added;
--- control requirement for hazardous wastes was adjusted;
--- control requirement for regular carried wastes was tightened.

Environmental Protection Control Standard for Imported Solid Wastes- Waste and Scrap of Paper or Paperboard (GB 16487.4-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection.

Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Waste or scrap of paper or paperboard

1 Scope of application

This standard specifies the environmental protection and control requirements for imported waste and scrap of paper or paperboard (hereinafter referred to as "Imported waste paper"). This standard applies to the import management of waste papers with the following harmonized system codes:

Harmonized System Code	Name of solid waste
4707100000	Recycled (waste and scrap), unbleached kraft, corrugated paper or paperboard
4707200000	Recycled (waste and scrap) paper and paperboard made from bleached chemical wood pulp (without mass dyeing)
4707300000	Recycled (waste and scrap) paper and paperboard made from mechanical wood pulp (such as, waste newspaper, magazine and similar printed materials)

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 5085.1 Identification standards for hazardous wastes - Corrosivity
GB 5085.2 Identification standards for hazardous wastes - Screening test for acute toxicity
GB 5085.3 Identification standards for hazardous wastes - Leaching toxicity
GB 5085.4 Identification standards for hazardous wastes - Flammability
GB 5085.5 Identification standards for hazardous wastes - Reactivity
GB 5085.6 Identification standards for hazardous wastes - Identification for toxic substance content
SN/T0570 Inspection procedures for radioactive contamination of imported wastes as raw materials
SN/T1791.13 Inspection and quarantine procedures for imported wastes as raw materials - Part 13: waste and scrap of paper or paperboard
National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Carried waste

Foreign substances introduced into imported waste paper during production, collection, packaging and transportation (excluding packing material for imported waste paper and other substances required for transportation).

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported waste paper, the following requirements shall be met:

a) imported waste paper shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for waste paper (including packing material) shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of waste papers shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) the specific activity of radioactive nuclide in waste paper shall be less than the threshold value listed in Table 1.

Table 1 Threshold Values of Specific Activity of Radioactive Nuclide

Nuclide	Specific activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Imported waste paper shall not contain explosive weaponry and ammunition, such as scrapped bomb, cannonball.

4.3 It's forbidden to import unsorted, mixed waste paper.

4.4 The total weight of the following carried wastes in imported waste paper shall be strictly restricted to a level not greater than 0.01% of the weight of the imported wooden waste.

a) incinerated or partially incinerated waste paper, waste paper contaminated by fire extinguishing agent;

b) sealed container;

c) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

d) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.5 In addition to the wastes listed above, the total weight of other carried wastes (including wooden waste, waste metal, waste glass, waste plastic, waste rubber, spent absorbent, aluminum-plastic composite bag, thermosensitive paper, asphalt-coated moisture-proof paper, self-adhesive paper, wallpaper, waxed paper, oiled paper, carbon paper, unsorted mixed waste paper) in the imported waste paper shall be restricted to a level not greater than 0.3% of the weight of the imported waste paper.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.

5.2 Items in section 4.4c) and 4.4d) herein shall be inspected according to the methods of GB5085.1-GB5085.6.

5.3 Other items herein shall be inspected according to SN/T1791.13.

ICS 13.030.50
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National Standards of the People's Republic of China

GB 16487.6—2017

Replaces **GB 16487.6—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials –Waste and scrap of iron and steel

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Preface

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, control environmental pollution due to imported waste and scrap of iron and steel as raw material and standardize examination and approval for import of solid wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported waste and scrap of iron and steel. This standard is one of a series of environmental protection control standards for imported solid wastes and applies to the import management of waste and scrap of iron and steel under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 1996, initially revised in 2005, and this is the second revision.

Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported waste and scrap of iron and steel was added;
--- control requirement for hazardous wastes was adjusted;
--- control requirement for regular carried wastes was tightened.

Environmental Protection Control Standard for Imported Solid Wastes- Waste and Scrap of Iron and Steel (GB 16487.6-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection.

Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Waste and scrap of iron and steel

1 Scope of application

This standard specifies the environmental protection and control requirements for imported waste and scrap of iron and steel. This standard applies to the import management of waste and scrap of iron and steel with the following harmonized system codes:

Harmonized System	Name of solid waste
7204100000	Waste and scrap of cast iron
7204210000	Waste and scrap of stainless steel
7204290000	Waste and scrap of other alloy steels
7204300000	Waste and scrap of tinned steel and iron
7204410000	Steel and iron waste generated during mechanical processing (mechanical processing refers to lathing, planning, milling, grinding, sawing, filing, cutting, punching)
7204490090	Waste and scrap of unlisted steel and iron
7204500000	Scrap of steel and iron ingot for re-smelting

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 5085.1 Identification standards for hazardous wastes - Corrosivity
GB 5085.2 Identification standards for hazardous wastes - Screening test for acute toxicity
GB 5085.3 Identification standards for hazardous wastes - Leaching toxicity
GB 5085.4 Identification standards for hazardous wastes - Flammability
GB 5085.5 Identification standards for hazardous wastes - Reactivity
GB 5085.6 Identification standards for hazardous wastes - Identification for toxic substance content
SN/T0570 Inspection procedures for radioactive contamination of imported wastes as raw materials
SN/T1791.4 Inspection and quarantine procedures for imported wastes as raw materials - Part 4: waste and scrap of steel and iron
National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Carried waste

Foreign substances introduced into imported waste and scrap of steel and iron during production, collection, packaging and transportation (excluding package for imported waste and scrap of steel and iron and other substances required for transportation).

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported waste and scrap of steel and iron, the following requirements shall be met:

a) imported waste and scrap of steel and iron shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for waste and scrap of steel and iron (including packing material) shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of waste and scrap of steel and iron shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) the specific activity of radioactive nuclide in waste and scrap of steel and iron shall be less than the threshold value listed in Table 1.

Table 1 Threshold Values of Specific Activity of Radioactive Nuclide

Nuclide	Specific activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Waste and scrap of steel and iron shall not contain explosive weaponry and ammunition, such as scrapped bomb, cannonball.

4.3 The total weight of the following carried wastes in waste and scrap of steel and iron shall be strictly restricted to a level not greater than 0.01% of the weight of the imported waste and scrap of steel and iron.

a) sealed container;

b) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

c) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.4 In addition to the wastes listed above, the total weight of other carried wastes (including wood waste, waste paper, waste plastic, waste rubber, powdery material, peeled iron scale) in waste and scrap of steel and iron

shall be restricted to a level not greater than 0.3% of the weight of the imported waste and scrap of steel and iron.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.

5.2 Items in section 4.3b) and 4.3c) herein shall be inspected according to the methods of GB5085.1-GB5085.6.

5.3 Other items herein shall be inspected according to SN/T1791.4.

ICS 13.030.50
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National Standards of the People's Republic of China

GB 16487.7—2017

Replaces **GB 16487.7—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Nonferrous Metal Scraps

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Foreword

In order to implement the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict the import of solid wastes, control the environmental pollution caused by nonferrous metal scraps imported as raw materials, and standardize the review process for import license on solid wastes that can be used as raw materials, this Standard is hereby formulated.

This Standard is one of a series of standards on control of environmental pollution caused by imported solid wastes, and is applicable for import administration of nonferrous metal scraps in the Catalogue of Solid Wastes Imported as Raw Materials.

This revision makes proper amendments to the foreword, scope, normative references, control requirements, inspection and other contents in GB16487.7-2005. With regard to control requirements, the control requirements on radioactivity, hazardous wastes, general inclusions and powdery wastes are mainly revised.

This Standard was first released on July 29, 1996.

This Standard was released for the second time on December 14, 2005.

This Standard was revised by the Department of Soil Environment Management and the Department of Technical Standards of the Ministry of Environmental Protection.

This Standard was drafted by the Chinese Research Academy of Environmental Science.

This Standard was approved by the Ministry of Environmental Protection on □□ □□, 20□□.

This Standard shall be implemented from □□ □□, 20□□.

This Standard is interpreted by the Ministry of Environmental Protection.

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Nonferrous Metal Scraps

1 Scope

This Standard stipulates the requirements on control of environmental pollution caused by imported nonferrous metal scraps.

This Standard is applicable for import administration of nonferrous metal scraps with the following HS (Harmonization System) codes:

HS Code	Name of Solid Wastes	Remarks
7112911010	Gold wastes and scraps	
7112911090	Gold-plating wastes and scraps (except for those that contain other precious metals)	
7112921000	Platinum and platinum-plating wastes and scraps (except for those that contain other precious metals, mainly used in recycled platinum)	
7404000090	Other copper wastes and scraps	Excluding metal and electrical appliance scraps, waste electric wires and cables, and waste electric motors
7503000000	Nickel wastes and scraps	
7602000090	Other aluminium wastes and scraps	Excluding metal and electrical appliance scraps, waste electric wires and cables, and waste electric motors
7902000000	Zinc wastes and scraps	
8002000000	Tin wastes and scraps	
8103300000	Tantalum wastes and scraps	
8101970000	Tungsten wastes and scraps	
8104200000	Magnesium wastes and scraps	
8106001092	Other unwrought bismuth wastes and scraps	
8108300000	Titanium wastes and scraps	
8109300000	Zirconium wastes and scraps	
8112921010	Unwrought germanium wastes and scraps	
8112922010	Unwrought vanadium wastes and scraps	
8112924010	Niobium wastes and scraps	
8112929011	Unwrought hafnium wastes and scraps	
8112929091	Unwrought gallium and rhenium wastes and scraps	
8113001010	Granular or powdery tungsten carbide wastes and scraps	
8113009010	Other tungsten carbide wastes and scraps, except for granular or powdery ones	

2 Normative References

The contents of this Standard have cited provisions of the following documents. For undated reference documents, their effective versions are applicable for this Standard.

GB 5085.1 Standards on Identification of Hazardous Wastes – Corrosive

GB 5085.2 Standards on Identification of Hazardous Wastes – Acute Toxicity Screening

GB 5085.3 Standards on Identification of Hazardous Wastes – Leaching Toxicity

GB 5085.4 Standards on Identification of Hazardous Wastes – Flammability

GB 5085.5 Standards on Identification of Hazardous Wastes – Reactivity

GB 5085.6 Standards on Identification of Hazardous Wastes – Identification of Toxic Substances

SN/T 0570 Rules on Inspection for Radioactive Contamination in Imported Metal Scraps

SN/T1791.9 Rules on Quarantine Procedures for Imported Metal Scraps, Section 9: Non-ferrous Metal Scrap

<<National Directory of Hazardous Wastes>> (Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security Section 39)

3 Definitions

The following definitions are adopted in this Standard:

3.1 Inclusions <Carried Waste>

Other materials mixed in the imported nonferrous metal scraps during manufacturing, collecting, packaging and transportation (excluding packing materials of imported solid wastes and other materials that must be used during transportation.)

4 Control Standards and Requirements

4.1 Radioactive pollution control of imported nonferrous metal scraps shall comply with the following requirements:

a) Mixtures of radioactive wastes are prohibited;

b) The external radiation penetration value (γ) of the nonferrous metal scraps (including packaging/containers) cannot exceed +0.25 μGy/h times the natural background value of the port of entry;

c) The surface α and β radioactive contamination levels of nonferrous metal scraps are: the average α of the 300 cm^2 of any part of the surface is no more than 0.04 Bq/cm^2, and that figure for β ray irradiation is no more than 0.4 Bq/cm^2;

d) The specific activity of non-natural radioactive nuclides in nonferrous metal scraps shall be lower than the limit values in Table 1.

Table 1 Limit Values of Specific Activity of Radioactive Nuclides

Radioactive Nuclide	Specific Activity (Bq/g)
^{59}Ni	$3x10^3$
^{63}Ni	$3x10^3$
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture of unknown ingredients	0.3
α mixture of unknown ingredients	0.1

4.2 Explosive arms and ammunition, such as abandoned bombs, bullets and others are prohibited among nonferrous metal scraps.

4.3 The following inclusions shall be strictly limited in nonferrous metal scraps, with their total weight not exceeding 0.01% of the weight of imported nonferrous metal scraps.

a) Closed containers;

b) Materials identified as hazardous wastes according to GB5085;

c) Other wastes listed in the National Directory of Hazardous Wastes.

4.4 The total weight of powdery substance (smelt slag, dedusting ash, dust, sludge, crystal salt, peeled-off metal oxide and others) with a particle size of not more than 2 mm included in nonferrous metal scraps shall not exceed 0.1% of the weight of imported nonferrous metal scraps.

4.5 In addition to the wastes listed in the articles above, all other inclusions (including wood wastes, waste paper, waste plastics, waste rubber, waste glass and other wastes) shall be strictly limited in nonferrous metal scraps, with their total weight not exceeding 0.3% of the total weight of imported nonferrous metal scraps.

5 Inspection

5.1 The wastes listed under Article 4.1 of this Standard shall be inspected according to the provisions in SN/T 0570.

5.2 The wastes listed under Articles 4.3(b) and 4.3(c) of this Standard shall be inspected according to the methods stipulated in GB5085.1~GB 5085.6.

5.3 The other provisions of this Standard shall be inspected according to the provisions in SN/T 1791.9.

ICS 13.030.50
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National Standards of the People's Republic of China

GB 16487.8—2017

Replaces **GB 16487.8—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Waste Electric Motors

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Foreword

In order to implement the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict the import of solid wastes, control the environmental pollution caused by waste electric motors imported as raw materials, and standardize the review process for import license on solid wastes that can be used as raw materials, this Standard is hereby formulated.

This Standard is one of a series of standards on control of environmental pollution caused by imported solid wastes, and is applicable for import administration of waste electric motors in the Catalogue of Solid Wastes Imported as Raw Materials.

This revision makes proper amendments to the foreword, scope, normative references, control requirements, inspection and other contents in GB16487.8-2005. With regard to control requirements, the control requirements on radioactivity, hazardous wastes and general inclusions are mainly revised.

This Standard was first released on July 29, 1996.

This Standard was released for the second time on December 14, 2005.

This Standard was revised by the Department of Soil Environment Management and the Department of Technical Standards of the Ministry of Environmental Protection.

This Standard was drafted by the Chinese Research Academy of Environmental Science.

This Standard was approved by the Ministry of Environmental Protection on □□ □□, 20□□.

This Standard shall be implemented from □□ □□, 20□□.

This Standard is interpreted by the Ministry of Environmental Protection.

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Waste Electric Motors

1 Scope

This Standard stipulates the requirements on control of environmental pollution caused by imported waste electric motors.

This Standard is applicable for import administration of waste electric motors (with copper as the main recycled material) with a HS code of 7404000010.

2 Normative References

The contents of this Standard have cited provisions of the following documents. For undated reference documents, their effective versions are applicable for this Standard.

GB 5085.1 Standards on Identification of Hazardous Wastes – Corrosive

GB 5085.2 Standards on Identification of Hazardous Wastes – Acute Toxicity Screening

GB 5085.3 Standards on Identification of Hazardous Wastes – Leaching Toxicity

GB 5085.4 Standards on Identification of Hazardous Wastes – Flammability

GB 5085.5 Standards on Identification of Hazardous Wastes – Reactivity

GB 5085.6 Standards on Identification of Hazardous Wastes – Identification of Toxic Substances

SN/T 0570 Rules on Inspection for Radioactive Contamination in Imported Metal Scraps

SN/T1791.8 Rules on Quarantine Procedures for Imported Metal Scraps, Section 8: Waste electric motors

<<National Directory of Hazardous Wastes>> (Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security Section 39)

3 Definitions

The following definitions are adopted in this Standard:

3.1 Inclusions <<Carried Waste>>

Other materials mixed in the imported waste electric motors during manufacturing, collecting, packaging and transportation (excluding packing materials of imported waste electric motors and other materials that must be used during transportation.)

4 Control Standards and Requirements

4.1 Radioactive pollution control of imported waste electric motors shall comply with the following requirements:

a) Radioactive wastes;

b) The external radiation penetration value (γ) of the waste electric motors (including packaging/containers) cannot exceed +0.25 μGy/h times the natural background value of the port of entry;

c) The surface α and β radioactive contamination levels of waste electric motors are: the average maximum detection level per 300 cm^2 of α ray irradiation on any surfaces is no more than 0.04 Bq/cm^2, and that figure for β ray irradiation is no more than 0.4 Bq/cm^2;

d) The specific activity of radioactive nuclides in waste electric motors shall be lower than the limit values in Table 1.

Table 1 Limit Values of Specific Activity of Radioactive Nuclides

Radioactive Nuclide	Specific Activity (Bq/g)
^{59}Ni	$3x10^3$
^{63}Ni	$3x10^3$
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture of unknown ingredients	0.3
α mixture of unknown ingredients	0.1

4.2 Explosive arms and ammunition, such as abandoned bombs, bullets and others are prohibited among waste electric motors.

4.3 The following inclusions shall be strictly limited in waste electric motors, with their total weight not exceeding 0.01% of the weight of imported waste electric motors.

a) Stripped oil stains in waste electric motors;

b) Closed containers;

c) Materials identified as hazardous wastes according to GB5085;

d) Other wastes listed in the National Directory of Hazardous Wastes.

4.5 In addition to the wastes listed in the articles above, all other inclusions (including waste wood blocks, waste paper, waste fiber, waste glass, peeled-off rust, waste plastics, waste rubber and other wastes) shall be limited in waste electric motors, with their total weight not exceeding 0.3% of the weight of imported waste electric motors.

5 Inspection

5.1 The wastes listed under Article 4.1 of this Standard shall be inspected according to the provisions in SN/T 0570.

5.2 The wastes listed under Articles 4.3(c) and 4.3(d) of this Standard shall be inspected according to the methods stipulated in GB5085.1~GB 5085.6.

5.3 The wastes listed under other articles of this Standard shall be inspected according to the provisions in SN/T 1791.8.

ICS 13.030.50
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National Standards of the People's Republic of China

GB 16487.9—2017

Replaces **GB 16487.9—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Waste Electric Wires and Cables

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Foreword

In order to implement the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict the import of solid wastes, control the environmental pollution caused by waste electric wires and cables imported as raw materials, and standardize the review process for import license on solid wastes that can be used as raw materials, this Standard is hereby formulated.

This Standard is one of a series of standards on control of environmental pollution caused by imported solid wastes, and is applicable for import administration of waste electric wires and cables in the Catalogue of Solid Wastes Imported as Raw Materials.

This revision makes proper amendments to the foreword, scope, normative references, control requirements, inspection and other contents in GB16487.9-2005. With regard to control requirements, the control requirements on radioactivity, hazardous wastes and general inclusions are mainly revised.

This Standard was first released on July 29, 1996.

This Standard was released for the second time on December 14, 2005.

This Standard was revised by the Department of Soil Environment Management and the Department of Technical Standards of the Ministry of Environmental Protection.

This Standard was drafted by the Chinese Research Academy of Environmental Science.

This Standard was approved by the Ministry of Environmental Protection on □□ □□, 20□□.

This Standard shall be implemented from □□ □□, 20□□.

This Standard is interpreted by the Ministry of Environmental Protection.

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Waste Electric Wires and Cables

1 Scope

This Standard stipulates the requirements on control of environmental pollution caused by imported waste electric wires and cables.

This Standard is applicable for import administration of waste electric wires and cables with the following HS (Harmonization System) codes:

HS Code	Name of Solid Wastes
7404000010	Waste electric wires and cables with copper as the main recycled material
7602000010	Waste electric wires and cables with aluminium as the main recycled material

2 Normative References

The contents of this Standard have cited provisions of the following documents. For undated reference documents, their effective versions are applicable for this Standard.

GB 5085.1 Standards on Identification of Hazardous Wastes – Corrosive

GB 5085.2 Standards on Identification of Hazardous Wastes – Acute Toxicity Screening

GB 5085.3 Standards on Identification of Hazardous Wastes – Leaching Toxicity

GB 5085.4 Standards on Identification of Hazardous Wastes – Flammability

GB 5085.5 Standards on Identification of Hazardous Wastes – Reactivity

GB 5085.6 Standards on Identification of Hazardous Wastes – Identification of Toxic Substances

SN/T 0570 Rules on Inspection for Radioactive Contamination in Imported Metal Scraps

SN/T1791.7 Rules on Quarantine Procedures for Imported Metal Scraps, Section 7: Waste electric wires and cables

<<National Directory of Hazardous Wastes>> (Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security Section 39)

3 Definitions

The following definitions are adopted in this Standard:

3.1 Inclusions <<Carried Waste>>

Other materials mixed in the imported waste electric wires and cables during manufacturing, collecting, packaging and transportation (excluding packing materials of imported waste electric wires and cables and other materials that must be used during transportation.)

4 Control Standards and Requirements

4.1 Radioactive pollution control of imported waste electric wires and cables shall comply with the following requirements:

a) Mixtures of radioactive wastes are prohibited;

b) The external radiation penetration value (γ) of the waste electric wires and cables (including packaging/containers) cannot exceed +0.25uGy/h times the natural background value of the port of entry;

(3) The surface α and β radioactive contamination levels of waste electric wires and cables are: the average α of the 300 cm^2 of any part of the surface is no more than 0.04 Bq/cm^2, and that figure for β ray irradiation is no more than 0.4 Bq/cm^2;

(4) The specific activity of radioactive nuclides in waste electric wires and cables shall be lower than the limit values in Table 1.

Table 1 Limit Values of Specific Activity of Radioactive Nuclides

Radioactive Nuclide	Specific Activity (Bq/g)
^{59}Ni	$3x10^3$
^{63}Ni	$3x10^3$
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture of unknown ingredients	0.3
α mixture of unknown ingredients	0.1

4.2 Explosive arms and ammunition, such as abandoned bombs, bullets and others are prohibited among waste electric wires and cables.

4.3 The following inclusions shall be strictly limited in waste electric wires and cables, with their total weight not exceeding 0.01% of the weight of waste electric wires and cables.

a) Closed containers;

b) Oil-sealed cables and optical cables as well as lead-covered cables;

c) Materials identified as hazardous wastes according to GB5085;

d) Other wastes listed in the National Directory of Hazardous Wastes.

4.4 In addition to the wastes listed in the articles above, all other inclusions (including waste paper, wood wastes, waste glass, peeled-off rust and other wastes) shall be strictly limited in waste electric wires and cables, with their total weight not exceeding 0.3% of the weight of imported waste electric wires and cables.

5 Inspection

5.1 The wastes listed under Article 4.1 of this Standard shall be inspected according to the provisions in SN0570.

5.2 The wastes listed under Articles 4.3(c) and 4.3(d) of this Standard shall be inspected according to the methods stipulated in GB5085.

5.3 Other provisions of the Standard shall be inspected according to the provisions in SN/T 1791.7.

ICS 13.030.50
Z 70

National Standards of the People's Republic of China

GB 16487.10—2017

Replaces **GB 16487.10—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Metal and Electrical Appliance Scraps

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Foreword

In order to implement the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict the import of solid wastes, control the environmental pollution caused by metal and electrical appliance scraps imported as raw materials, and standardize the review process for import license on solid wastes that can be used as raw materials, this Standard is hereby formulated.

This Standard is one of a series of standards on control of environmental pollution caused by imported solid wastes, and is applicable for import administration of metal and electrical appliance scraps in the Catalogue of Solid Wastes Imported as Raw Materials.

This revision makes proper amendments to the foreword, scope, normative references, control requirements, inspection and other contents in GB16487.10-2005. With regard to control requirements, the control requirements on radioactivity, hazardous wastes and general inclusions are mainly revised.

This Standard was first released on July 29, 1996.

This Standard was released for the second time on December 14, 2005.

This Standard was revised by the Department of Soil Environment Management and the Department of Technical Standards of the Ministry of Environmental Protection.

This Standard was drafted by the Chinese Research Academy of Environmental Science.

This Standard was approved by the Ministry of Environmental Protection on □□ □□, 20□□.

This Standard shall be implemented from □□ □□, 20□□.

This Standard is interpreted by the Ministry of Environmental Protection.

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials -- Metal and Electrical Appliance Scraps

1 Scope

This Standard stipulates the requirements on control of environmental pollution caused by imported metal and electrical appliance scraps.

This Standard is applicable for import administration of metal and electrical appliance scraps with the following HS (Harmonization System) codes, including off-cuts, defective goods or unaccepted products produced during processing of metal and electrical appliances.

HS Code	Name of Solid Wastes
7204490020	Metal and electrical appliance scraps with steel and iron as the main recycled materials
7404000010	Metal and electrical appliance scraps with copper as the main recycled material
7602000010	Metal and electrical appliance scraps with aluminium as the main recycled material

2 Normative References

The contents of this Standard have cited provisions of the following documents. For undated reference documents, their effective versions are applicable for this Standard.

GB 5085.1 Standards on Identification of Hazardous Wastes – Corrosive

GB 5085.2 Standards on Identification of Hazardous Wastes – Acute Toxicity Screening

GB 5085.3 Standards on Identification of Hazardous Wastes – Leaching Toxicity

GB 5085.4 Standards on Identification of Hazardous Wastes – Flammability

GB 5085.5 Standards on Identification of Hazardous Wastes – Reactivity

GB 5085.6 Standards on Identification of Hazardous Wastes – Identification of Toxic Substances

SN/T 0570 Rules on Inspection for Radioactive Contamination in Imported Metal Scraps

SN/T1791.6 Rules on Quarantine Procedures for Imported Metal Scraps, Section 6: Metal and electric appliance scraps

<<National Directory of Hazardous Wastes>> (Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security Section 39)

3 Definitions

The following definitions are adopted in this Standard:

3.1 Inclusions <<Carried Waste>>

Other materials mixed in the imported metal and electrical appliance scraps during manufacturing, collecting, packaging and transportation (excluding packing materials of imported metal and electrical appliance scraps and other materials that must be used during transportation.)

4 Control Standards and Requirements

4.1 Radioactive pollution control of imported metal and electrical appliance scraps shall comply with the following requirements:

a) Mixtures of radioactive wastes are prohibited;

b) The external radiation penetration value (γ) of the metal and electrical appliance scraps (including packaging/containers) cannot exceed +0.25 μGy/h times the natural background value of the port of entry;

c) The surface α and β radioactive contamination levels of metal and electrical appliance scraps are: the average α of the 300 cm^2 of any part of the surface is no more than 0.04 Bq/cm^2, and that figure for β ray irradiation is no more than 0.4 Bq/cm^2;

d) The specific activity of radioactive nuclides in metal and electrical appliance scraps shall be lower than the limit values in Table 1.

Table 1 Limit Values of Specific Activity of Radioactive Nuclides

Radioactive Nuclide	Specific Activity (Bq/g)
^{59}Ni	$3x10^3$
^{63}Ni	$3x10^3$
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture of unknown ingredients	0.3
α mixture of unknown ingredients	0.1

4.2 Explosive arms and ammunition, such as abandoned bombs, bullets and others are prohibited among metal and electrical appliance scraps.

4.3 The following inclusions shall be strictly limited in metal and electrical appliance scraps, with their total weight not exceeding 0.01% of the weight of imported metal and electrical appliance scraps.

a) Transformers, ballasts and compressors on which the insulating oil materials are not removed;

b) Closed containers;

c) Materials identified as hazardous wastes according to GB5085;

d) Other wastes listed in the National Directory of Hazardous Wastes.

4.4 In addition to the wastes listed in the articles above, all other inclusions (including wood wastes, waste paper, peeled-off rust, mechanical and electrical products banned on import and other wastes) shall be limited in metal and electrical appliance scraps, with their total weight not exceeding 0.3% of the weight of imported metal and electrical appliance scraps.

4.5 The weight of recyclable materials in imported metal and electrical appliance scraps shall be no less than 80% of the total weight of metal and electrical appliance scraps, among which the content of recyclable metal shall be no less than 80% of the total weight of metal and electrical appliance scraps.

5 Inspection

5.1 The wastes listed under Article 4.1 of this Standard shall be inspected according to the provisions in SN0570.

5.2 The wastes listed under Articles 4.3(c) and 4.3(d) of this Standard shall be inspected according to the methods stipulated in GB5085.

5.3 The wastes listed under other articles of this Standard shall be inspected according to the provisions in SN/T1791.6.

ICS 13.030.50
Z 70

National Standards of the People's Republic of China

GB 16487.11—2017

Replaces **GB 16487.11—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials – Vessels and other floating structure for breaking up

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Preface

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, control environmental pollution due to imported vessels and other floating structures for breaking up and standardize examination and approval for import of solid wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported scrap vessels.

This standard is one of a series of environmental protection control standards for imported solid wastes and applies to the import management of scrap vessels under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 1996, initially revised in 2005, and this is the second revision.

Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported scrap vessels was added;
--- control requirement for hazardous wastes was adjusted;

Environmental Protection Control Standard for Imported Solid Wastes- Vessels and Other Floating Structures for Breaking Up (GB 16487.11-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection.

Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Vessels and other floating structures for breaking up

1 Scope of application

This standard specifies the environmental protection and control requirements for imported vessels and other floating structures for breaking up (hereinafter referred to as "Scrap vessels").

This standard applies to the import management of scrap vessels with harmonized system code 8908000000 (excluding aircraft carrier).

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 3552 Discharge standard for pollutants from ships
GB 5085.1 Identification standards for hazardous wastes - Corrosivity
GB 5085.2 Identification standards for hazardous wastes - Screening test for acute toxicity
GB 5085.3 Identification standards for hazardous wastes - Leaching toxicity
GB 5085.4 Identification standards for hazardous wastes - Flammability
GB 5085.5 Identification standards for hazardous wastes - Reactivity
GB 5085.6 Identification standards for hazardous wastes - Identification for toxic substance content
SN/T0570 Inspection procedures for radioactive contamination of imported wastes as raw materials
SN/T1791.5 Inspection and quarantine procedures for imported wastes as raw materials - Part 5: Vessels and other floating structures for breaking up
National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)
Catalog of Hazardous Chemicals (Order 2015 No.5 issued by State Administration of Work Safety, Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of Environmental Protection, Ministry of Transport, Ministry of Agriculture, National Health and Family Planning Commission, General Administration of Quality Supervision, Inspection and Quarantine, National Railway Administration, Civil Aviation Administration)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Carried waste
Domestic wastes generated by sailors onboard and cargo residue in imported scrap vessels. Articles to be used during the voyage as well as cargo and its residue in shipwreck are excluded.

3.2 Light tonnage
Light tonnage refers to the water displacement of an unloaded ship and is the measurement unit for the weight of the ship.

3.3 Hazardous chemical substance
Chemical substances listed in *Catalogue of Hazardous Chemicals* issued by relevant authorities of the People's Republic of China.

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported scrap vessels, the following requirements shall be met:

a) scrap vessels shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for imported scrap vessels shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of scrap vessel shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) the specific activity of radioactive nuclide in a scrap vessel shall be less than the threshold value listed in Table 1.

Table 1 Threshold Values of Specific Activity of Radioactive Nuclide

Nuclide	Specific activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Scrap vessel shall not contain explosive weaponry and ammunition, such as scrapped bomb, cannonball.

4.3 It's forbidden to import a scrap vessel whose cabin is not cleaned.

4.4 The total weight of the following carried wastes in scrap vessel shall be strictly restricted to a level not greater than 0.01% of the light tonnage of the imported scrap vessel.

a) asbestos waste or asbestos-containing wastes (excluding thermally and electrically insulating asbestos material contained in the vessel);

b) residual oil and oil sludge in cargo hold of the scrap vessel;

c) sealed container (excluding containers contained in the vessel);

b) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

c) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.5 The content of asbestos used as the thermally and electrically insulating material of the vessel shall not exceed 0.08% of the light tonnage of the scrap vessel.

4.6 In addition to the carried wastes listed above, the total weight of other carried wastes in a scrap vessel imported by way of tugboat transportation shall not exceed 0.05% of the light tonnage of the scrap vessel.

4.7 In addition to carried wastes listed above, the total weight (W_{waste}) of other carried wastes in a scrap vessel imported by way of autonomous sailing shall satisfy the following formula:

$$W_{waste} \leq 1.5TN$$

Wherein: W_{waste} – Total weight of other carried wastes in the vessel, kg;

T- berthing time of the vessel at the port, d;

N- number of sailors aboard the vessel, person;

1.5- factor, kg/person.d.

4.8 Special-purpose vessels that have carried cargos listed in section 4.4 and other hazardous chemicals shall be cleaned. The importer should report the names and main components of the substances listed in 4.4 and other hazardous chemicals carried by the vessel to the inspection authority.

4.9 Pollutant discharge from scrap vessel shall meet the requirements of GB3552.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.

5.2 Items in section 4.4d) and 4.4e) herein shall be inspected according to the methods of GB5085.1-GB5085.6.

5.3 Other items herein shall be inspected according to SN/T1791.5.

ICS 13.030.50
Z 70

National Standards of the People's Republic of China

GB 16487.12—2017

Replaces **GB 16487.12—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials – Waste and scrap of plastics

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Preface

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, control environmental pollution due to imported waste and scrap of plastics as raw materials and standardize examination and approval for import of solid wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported waste and scrap of plastics.

This standard is one of a series of environmental protection control standards for imported solid wastes as raw materials and applies to the import management of waste and scrap of plastics under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 1996, initially revised in 2005, and this is the second revision.

Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported waste and scrap of plastics was added;
--- control requirement for hazardous wastes was adjusted;
--- control requirement for regular carried wastes was tightened.

Environmental Protection Control Standard for Imported Solid Wastes- Waste and Scrap of Plastics (GB 16487.12-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection. Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Waste and scrap of plastics

1 Scope of application

This standard specifies the environmental protection and control requirements for imported waste and scrap of plastics.

This standard applies to the import management of waste and scrap of plastics with the following harmonized system codes, excluding unsorted, mixed waste plastics, uncompressed waste foamed plastics, wastes and scraps of compact discs.

Harmonized System Code	Name of solid waste
3915100000	Waste, scrap and tailing of polyvinyl
3915200000	Waste, scrap and tailing of polystyrene
3915300000	Waste, scrap and tailing of polyvinyl chloride
3915901000	Waste, scrap and tailing of polyethylene terephthalate
3915909000	Waste, scrap and tailing of other plastics

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 5085.1 Identification standards for hazardous wastes - Corrosivity
GB 5085.2 Identification standards for hazardous wastes - Screening test for acute toxicity
GB 5085.3 Identification standards for hazardous wastes - Leaching toxicity
GB 5085.4 Identification standards for hazardous wastes - Flammability
GB 5085.5 Identification standards for hazardous wastes - Reactivity
GB 5085.6 Identification standards for hazardous wastes - Identification for toxic substance content
SN/T0570 Inspection procedures for radioactive contamination of imported wastes as raw materials
SN/T1791.1 Inspection and quarantine procedures for imported wastes as raw materials - Part 1: waste and scrap of plastics
National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Waste and scrap of plastics

Thermoplastic tailings, cuttings and defective products generated during plastic production and plastic product processing.

3.2 Carried waste

Foreign substances introduced into imported waste and scrap of plastics during production, collection, packaging and transportation (excluding packing material for imported waste and scrap of plastics and other substances required for transportation).

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported waste and scrap of plastics, the following requirements shall be met:

a) waste and scrap of plastics shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for imported waste and scrap of plastics shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of waste and scrap of plastics shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) the specific activity of radioactive nuclide in waste and scrap of plastics shall be less than the threshold value listed in Table 1.

Table 1 Threshold Values of Specific Activity of Radioactive Nuclide

Nuclide	Specific activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Waste and scrap of plastics shall not contain explosive weaponry and ammunition such as scrapped bomb, cannonball.

4.3 The total weight of the following carried wastes in waste and scrap of plastics shall be strictly restricted to a level not greater than 0.01% of the weight of the imported waste and scrap of plastics.

a) incinerated or partially incinerated waste plastics, and waste plastics contaminated by fire extinguishing agent;

b) used intact plastic container;

c) sealed container;

d) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

e) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.4 In addition to the wastes listed above, the total weight of other carried wastes (including waste paper, wood scrap, waste metal, waste glass, waste rubber, thermosetting plastic, waste and scrap of compact disc, other plastics containing metal coating, uncompressed waste foamed plastics, other unsorted, mixed waste plastics) in imported waste and scrap of plastics shall be restricted to a level not greater than 0.3% of the weight of the imported waste and scrap of plastics.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.

5.2 Items in section 4.3d) and 4.3e) herein shall be inspected according to the methods of GB5085.1-GB5085.6.

5.3 Other items herein shall be inspected according to SN/T1791.1.

ICS 13.030.50
Z 70

National Standards of the People's Republic of China

GB 16487.13—2017

Replaces **GB 16487.13—2005**

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials – Compressed piece of scrap automobile

Released on □□-□□-2017 Implemented on □□-□□-2017

Released by: Ministry of Environmental Protection
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

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Preface

This standard is formulated in order to enforce the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, strictly restrict import of solid wastes, control environmental pollution due to imported compressed piece of scrap automobile as raw material and standardize examination and approval for import of solid wastes as raw materials.

This standard specifies the environmental protection and control requirements for imported compressed piece of scrap automobile.

This standard is one of a series of environmental protection control standards for imported solid wastes and applies to the import management of compressed piece of scrap automobile under the catalogue of imported solid wastes as raw materials.

This standard was initially issued in 2005 and this is the first revision. Main contents of this revision:
--- requirement on external exposure penetrating radiation dose for imported compressed piece of scrap automobile was added;
--- a control requirement that non-metal materials as components of the scrap automobile should be removed from the compressed piece of scrap automobile was added;
--- control requirement for hazardous wastes was adjusted;
--- control requirement for regular carried wastes was tightened.

Environmental Protection Control Standard for Imported Solid Wastes- Compressed Piece of Scrap Automobile (GB 16487.2-2005) is voided as of the effective date of this standard.

This standard was revised under the leadership of Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection.
Main drafting organization for this standard: Chinese Research Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on (date).

This standard shall come into effect on (date).

This standard shall be interpreted by Ministry of Environmental Protection.

Environmental protection control standard for imported solid wastes as raw materials - Compressed piece of scrap automobile

1 Scope of application

This standard specifies the environmental protection and control requirements for imported compressed piece of scrap automobile, and control requirements for the extent of dismantling and compression for scrap automobile before formation of compressed piece.

This standard applies to the import management of compressed piece of scrap automobile with harmonized system code 7204490010.

2. Normative references

The provisions in the following documents are cited in this standard. For undated references, the valid edition of the normative document applies to this standard.

GB 5085.1 Identification standards for hazardous wastes - Corrosivity

GB 5085.2 Identification standards for hazardous wastes - Screening test for acute toxicity

GB 5085.3 Identification standards for hazardous wastes - Leaching toxicity

GB 5085.4 Identification standards for hazardous wastes - Flammability

GB 5085.5 Identification standards for hazardous wastes - Reactivity

GB 5085.6 Identification standards for hazardous wastes - Identification for toxic substance content

SN/T0570 Inspection procedures for radioactive contamination of imported wastes as raw materials

SN/T1791.1 Inspection and quarantine procedures for imported wastes as raw materials - Part 11: compressed piece of scrap automobile

National Catalogue of Hazardous Wastes (Order No.39 issued by Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security)

3. Terms and definitions

The following terms and definitions apply to this standard.

3.1 Compressed piece of scrap automobile

Scrap automobile product that has lost its functions and has undergone compression treatment with its original shape unrestorable.

3.2 Carried waste

Foreign substances introduced into imported compressed piece of scrap automobile during collection, packaging and transportation (including articles for daily use placed in the automobile by the driver and passengers, and excluding package for imported compressed piece of scrap automobile and other substances required for transportation).

4 Control criteria and requirements

4.1 To control radioactive contamination induced by imported compressed piece of scrap automobile, the following requirements shall be met:

a) imported compressed piece of scrap automobile shall not contain radioactive wastes;

b) the external exposure penetrating radiation dose (γ) for compressed piece of scrap automobile (including packing material) shall be no more than +0.25μGy/h greater than the normal natural background radiation level at the place where the port of import is located;

c) α-ray and β-ray radioactive contamination levels on the surface of compressed piece of scrap automobile shall be as follows: the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray;

d) the specific activity of radioactive nuclide in compressed piece of scrap automobile shall be less than the threshold value listed in Table 1.

Table 1 Threshold Values of Specific Activity of Radioactive Nuclide

Nuclide	Specific activity (Bq/g)
^{59}Ni	3x10^3
^{63}Ni	3x10^3
^{54}Mn	0.3
^{60}Co	0.3
^{65}Zn	0.3
^{55}Fe	300
^{90}Sr	3
^{134}Cs	0.3
^{137}Cs	0.3
^{235}U	0.3
^{238}U	0.3
^{239}Pu	0.1
^{241}Am	0.3
^{152}Eu	0.3
^{154}Eu	0.3
^{94}Nb	0.3
β-γ mixture with unknown components	0.3
α mixture with unknown components	0.1

4.2 Compressed piece of scrap automobile shall not contain explosive weaponry and ammunition, such as scrapped bomb, cannonball.

4.3 The following components of the scrap automobile should be dismantled and removed from the compressed piece of scrap automobile, and the total weight of these components should not exceed 0.01% of the weight of the scrap automobile.

a) safety airbag

b) battery;

c) fire extinguisher and sealed pressure container;

d) engine oil, gear oil, gasoline, diesel oil, brake fluid and coolant;

e) refrigerant, catalyst;

f) contaminated oil sludge and oil stain.

4.4 Non-metal materials that are components of the scrap automobile (such as tires, seats and cushions) should be removed from the compressed piece of scrap automobile; the total weight of these components should not exceed 0.3% of the total weight of the compressed piece of the scrap automobile.

4.5 The total weight of the following carried wastes in the compressed piece of scrap automobile shall be strictly restricted to a level not greater than 0.01% of the total weight of the compressed piece of scrap automobile.

a) sealed container;

b) hazardous wastes with one or more hazardous characteristics including corrosivity, toxicity, flammability and reactivity as identified according to the GB5085.1- GB5085.6 identification standards.

c) other wastes listed in the *National Catalogue of Hazardous Wastes*.

4.6 In addition to the wastes listed above, the total weight of other carried wastes (including wood waste, waste paper, waste rubber, thermosetting plastic, domestic garbage) in the compressed piece of scrap automobile shall be restricted to a level not greater than 0.3% of the total weight of the compressed piece of scrap automobile.

5 Inspection

5.1 Items in section 4.1 herein shall be inspected according to SN/T0570.
5.2 Items in section 4.5b) and 4.5c) herein shall be inspected according to the methods of GB5085.1-GB5085.6.
5.3 Other items herein shall be inspected according to SN/T1791.11.

Environmental Protection Control Standard for Imported Solid Wastes as Raw Materials
(GB 16487.1~13 – 2005)

(Draft for Comments)

Drafting Notes

Standard Drafting Group
August 2017

Project name: *Revision for Environmental Protection Control Standards for Imported Solid Wastes as Raw Materials*

（GB 16487.1-GB 16487.13-2005）

Project manager: Zhou Bingyan

Drafting organization: Drafting Group, Chinese Research Academy of Environmental Sciences

Main members: Zhou Bingyan, Yu Hongjin

Technical personnel of Standard Institute: Li Qin, Wang Haiyan

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1. Background information about standard revision

1.1 Source of task

In *The Implementation Plan for Prohibiting the Entry of Foreign Garbage and Advancing the Reform of Solid Waste Import Administration System* approved on April 18, 2017 at the 34th meeting of the Central Leading Team for comprehensively deepening reform, it was pointed out that with a focus on safeguarding national ecological environment safety and public health, we shall improve import management system for solid wastes, formulate a schedule for prohibition of import of solid wastes by sectors and categories, adjust the import management catalogue batch wise by categories, and utilize comprehensive legal, economic and administrative measures to considerably reduce the types and quantities of imported wastes.

In order to enforce the requirements of *The Implementation Plan for Prohibiting the Entry of Foreign Garbage and Advancing the Reform of Solid W*aste Import Administration System, on May 3, 2017, Department of Soil Environment Management of Ministry of Environmental Protection authorized Solid Wastes Institute of Chinese Research Academy of Environmental Sciences (currently Soil and Solid Wastes Institute of Chinese Research Academy of Environmental Sciences) to revise *Environmental Protection Control Standards for Imported Solid Wastes* (GB16487.1- GB16487.13- 2005, hereinafter referred to as "Environmental Protection Control Standards").

1.2 Working process

(1) In May 2017, the standard drafting group was established.

(2) In May and June 2017, the standard drafting group searched requirements of relevant domestic and foreign standards, regulations and management systems, determined basic ideas, goals and approaches for standard revision, conducted investigation and analysis at relevant management departments, trade associations and relevant enterprise, and obtained abundant relevant data.

(3) In July 2017, the standard drafting group summarized, analyzed and discussed the documents and data collected and data collected from enterprises during onsite investigation, and formulated the first draft of the revised environmental protection control standards and its drafting notes.

(4) On July 27, 2017, Department of Soil Environment Management and Department of Science, Technology and Standards of Ministry of Environmental Protection held the project proposal appraisal meeting for environmental protection control standard revision and the technical review meeting for standard draft for comments. Attending experts agreed with the technical approach, framework structure and technical contents for standard revision. They unanimously approved the technical review of the draft for comments for standard revision. Based on the comments and suggestions collected from the meeting, the drafting group revised and improved the text of the standards and the draft for comments of the drafting notes.

2. Necessity of standard revision

Current environmental protection control standards were revised and enforced in 2005. From 2005 onwards there have been considerable changes in the socioeconomic conditions in China and environmental protection situation. In view of severe environmental pollution and enhanced quality of life, it's very urgent to improve environmental quality. Current environmental protection control standards are unsuitable for current environmental management situation, so it's necessary to comprehensively revise them to make them more concise, practical, rigorous and efficient.

Standard revision was performed in order to enforce the requirement "Raise the bar for solid waste import. Further tighten standards, revise the *Environmental Protection Control Standards for Imported Solid Wastes*, tighten the control indicators for carried wastes" specified i*n Circular of General Office of the State Council on Issuing the Implementation Plan for Prohibiting the Entry of Foreign Garbage and Advancing the Reform of Solid Waste Import Administration System* (GuoBanFa (2007) No.70).

3. Information about relevant domestic and foreign standards

3.1 Relevant overseas information

(1) United States

The United States is a member country of Organization for Economic Co-operation and Development (OECD) and has entered into bilateral agreements on transboundary movements of hazardous wastes with Canada, Mexico, Malaysia, Costa Rica, and the Philippines, so the United States must comply with relevant resolutions on transboundary movements of hazardous wastes issued by OECD and such bilateral agreements to import and export wastes. Under circumstances where both bilateral agreement and OECD resolutions (Canada and Mexico are OECD members) apply, bilateral agreements prevail.

In addition to OECD resolutions and bilateral agreements, import and export of wastes in the United States shall be subject to all applicable domestic laws and regulations (federal and/or states), including relevant clauses of Resource Conservation and Recovery Act (RCRA) listed in Code of Federal Regulations (CFR). Although the United States is not a signatory of the Basel Convention, it has a long history in export of hazardous wastes and has established an improved supervision and management system for import and export of hazardous wastes.

The United States issued Resource Conservation and Recovery Act (RCRA) in 1976 and revised it in 1986. This is a fundamental law for solid waste management in the United States. RCRA also stipulated a management system for solid wastes and specified provisions on transboundary movements of hazardous wastes. Import and export of hazardous wastes must abide by the provisions of RCRA.

In terms of the classification standard for renewable resources, such as waste paper grading standard, the grading standard defines 51 grades of waste paper and specifies the allowable content of carried waste and maximum content of out throws in each grade of waste paper. See Table 1 for requirements for partial waste papers.

Table 1 United States Waster Paper Grading Standard (note: this is only a part of waste paper grades)

Waste paper grade	Control requirement
PS-1 Mixed Paper	Consists of a mixture of various qualities of paper not limited as to type of packing or fiber content. Prohibitive materials may not exceed 2%. Total out throws may not exceed 10%.
PS-3 Super Mixed Paper	Consists of a baled sorted mixture of various qualities of papers containing less than 10% of groundwood stock, coated or uncoated. Prohibitive materials may not exceed 0.5%; total out throws may not exceed 3% .
PS-4 Box Board Cuttings	Consists of baled new cuttings of paperboard used in the manufacture of folding paper cartons, set-up boxes and similar boxboard products. Prohibitive materials may not exceed 0.5%. Total out throws may not exceed 2%.
PS-5 Mill Wrappers	Consists of baled paper used as outside wrap for rolls, bundles or skids of finished paper. Prohibitive materials may not exceed 0.5%. Total out throws may not exceed 3%.
PS-6 Newspapers	Consists of baled newspapers, containing no more than 5% of other papers. Prohibitive materials may not exceed 0.5%. Total out throws may not exceed 2%.
PS-7 Special Newspapers	Consists of baled sorted newspapers, not sunburned, free from paper other than newspaper, containing not more than the normal percentage of rotogravure and coloured sections. Prohibitive materials may not exceed: none permitted. Total out throws may not exceed 0.25%.
PS-8 Special Newspapers (De-ink Quality)	Consists of baled sorted newspapers, not sunburned, free from magazines, white blank, pressroom over-issues, and paper other than newspaper, containing not more than the normal percentage of rotogravure and coloured sections. This grade must be tare-free. Prohibitive materials may not exceed: none permitted. Total out throws may not exceed 0.25%.
PS-9 Over-issue Newspapers	Consists of overrun newspapers printed on newsprint, baled or securely tied in bundles, containing not more than the normal percentage of rotogravure and coloured sections. Prohibitive materials may not exceed: none permitted. Total out throws may not exceed: none permitted.
PS-10 Magazines	Consists of baled coated magazines, catalogues and other similar printed materials. May contain a small percentage of uncoated newspaper. Prohibitive materials may not exceed 1%. Total out throws may not exceed 3%.
PS-11 Corrugated Containers	Consists of baled corrugated containers having liners of either test liner, jute or kraft. Prohibitive materials may not exceed 1%. Total out throws may not exceed 5%.
PS-12 Double Sorted Corrugated Containers	Consists of baled, double sorted corrugated containers, generated from supermarkets and/or industrial and commercial facilities, having liners or test liner, jute or kraft. Material has been specially sorted to be free of boxboard, off-shore corrugated paper, glue or wax. Prohibitive materials may not exceed 0.5%. Total out throws may not exceed 2%.

(2) European Union

For hazardous wastes and two types of special wastes under the Basel Convention, the import and export authorities of member countries uniformly adopt prior notification procedure and approval procedure for movement of wastes according to Basel Convention. Transboundary movements of non-hazardous wastes between two member countries and between a member country and a non-EU country are regulated respectively.

As to the classification standard for wastes, such as waste paper grading standard, the grading standard specifies different grades of waste paper and prohibitive material and classifies recyclable waste papers into 5 grades and 57 types. This standard also specifies that waste paper shall not contain foreign matters that may cause damage to production process and mechanical equipment, such as metal, plastic, glass, knitwear, wood article, sand and construction material, synthetic material, synthetic paper. In addition, the humidity in waste paper and paperboard is required to be no more than natural humidity. If the humidity in dry air is greater than 10%, the extra 10% weight shall be deducted. See Table 2 for specific indicators.

Table 2 European Waster Paper Grading Standard (note: this is only a part of waste paper grades)

Waste paper grade	No.	Requirement
Group 1 Ordinary grades	1.01	Mixed paper and board, unsorted, but unusable materials removed. A mixture of various grades of paper and board, without restriction on short fiber content.
	1.02	Mixed papers and board (sorted). A mixture of various qualities of paper and board, containing a maximum of 40% of newspapers and magazines.
	1.03	Grey board. Printed and unprinted white lined and unlined grey board or mixed board, free from corrugated material.
Group 2 Medium grades	2.01	Newspaper. Newspapers, containing a maximum of 5% of newspapers or advertisements colored in the mass.
	2.02	Unsold newspapers. Unsold daily newspapers, free from additional inserts or illustrated material colored in the mass.
	2.02.01	Unsold newspapers, no flexographic printing allowed. Unsold daily newspapers, free from additional inserts or illustrated material colored in the mass, strings allowed. No flexographic printed material allowed.
	2.03	Lightly printed white shavings. Mainly mechanical pulp based paper.
	2.03.01	Lightly printed white shavings. Mainly mechanical pulp based paper, without glue.
Group 3 High grades	3.01	Mixed lightly colored printers shavings Mixed shavings of printing and writing papers, lightly colored in the mass, containing a minimum of 50% of wood free paper.
	3.02	Mixed lightly colored wood free printer shavings. Mixed shavings of printing and writing papers lightly colored in the mass, containing a minimum of 90% of wood free paper.
	3.03	Wood free binders White wood free lightly printed shavings with glue, free from paper colored in the mass. May contain a maximum of 10% of mechanical pulp based paper.
Group 4 Kraft grades	4.01	New shavings of corrugated board. Shavings of corrugated board, with liners of kraft.
	4.01.01	Unused corrugated kraft. Unused boxes, sheets and shavings of corrugated board, with kraft liners only, the fluting made from chemical or thermo-chemical pulp.
	4.01.02	Unused corrugating material. Unused boxes, sheets and shavings of corrugated board, with liners of kraft.
	4.02	Used corrugated kraft I. Used boxes of corrugated board, with kraft liners only, the fluting made from chemical or thermo-chemical pulp.
	4.03	Used corrugated kraft II. Used boxes of corrugated board, with liners of kraft but having at least one liner made of kraft.
Group 5 Special grades	5.01	Mixed recovered paper and board. Unsorted paper and board, separated at source.
	5.02	Mixed packaging. A mixture of various qualities of used paper and board packaging, free from newspapers and magazines.
	5.03	Liquid board packaging. Used liquid packaging board including used PE-coated liquid packaging board (with or without aluminum content), containing a minimum of 50% by weight of fibers, and the balance being aluminum or coatings.

(3) Japan

As a signatory of the Basel Convention, Japan strictly follows relevant provisions of Basel Convention to import and export hazardous wastes. As a member county of OECD, Japan abides by relevant resolutions on control of transboundary movements of hazardous wastes issued by OECD. In Japan, import and export of

wastes are regulated by two laws: Waste Management and Public Cleansing Law (hereinafter referred to as "Waste Management Law"), and Law for the Control of Import and Export of Specified Wastes and Other Wastes ("Basel Law"). The Waste Management Law is to regulate "valueless" solid wastes. All valuable solid wastes are called "renewable resources" and the Basel Law is to regulate the import and export of "valuable wastes as renewable resource with hazardous characteristics". The import and export of "renewable resources" is not regulated and there is no environment protection control standards and requirements similar to those of China in the solid waste import and export management system.

(4) Brazil

Brazil officially became a signatory of the Basel Convention in 1992. Therefore, Brazil shall comply with relevant requirements of Basel Convention to regulate transboundary movements of hazardous wastes. However, the scope of solid wastes subject to import and export control in Brazil is only restricted to the hazardous wastes specified in Article 1 (1) a and wastes specified in Article 1 (1)b in Basel Convention, such as waste and used tire listed in Annex 10-C (CONAMA Resolution No.235), wastes for final disposal or incineration (CONAMA Resolution No.8, Sep. 19th, 1991) and used consumer goods (its import was forbidden by Ministry of Development, Industry and Foreign Trade Order No.235, Dec. 7th, 2006) There are no other special control requirements on transboundary movements of wastes other than those listed above. In the solid waste import and export management system, there is no environmental protection control standards and requirements similar to those of China.

3.2 Information about environmental control standards in China

3.2.1 Contents and features

In order to enforce Article 25 of the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes* "imported solid wastes must comply with national environmental protection control standards and should be satisfactorily inspected by quality supervision, inspection and quarantine authority" and prevent import of solid wastes that cannot be used as raw materials, China formulated and issued environmental protection control standards in 1996 and revised them in 2005. These environmental protection control standards have played an important role in the management of imported wastes since their enforcement.

Current environmental protection control standards consist of 13 standards (GB 16487.1-GB 16487.13-2005), covering waste and scrap of steel and iron, smelt slag, non-ferrous metal scraps, metal and electrical appliance scraps, waste wires and cables, waste electric motors, scrap vessels, compressed piece of scrap automobile, waste paper, waste and scrap of plastics, wood wastes, waste fibers and bone wastes. These standards are focused on controlling carried wastes and radioactive contamination.

(1) Control of carried wastes

"Carried wastes" in these standards are divided into two categories: one category includes externally introduced substances other than imported wastes; another category includes wastes and residues that are carried by or are components of the imported waste. In the standards, hazardous wastes are controlled by two categories: prohibitive waste and strictly restricted waste.

(1) Externally introduced carried wastes are controlled by three categories.

1. Prohibitive carried wastes. This category mainly includes radioactive wastes, hazardous wastes, explosive weaponry and ammunition and other prohibitive substances. Such wastes shall not be contained in imported wastes and are listed as prohibitive wastes.

2. Strictly restricted carried wastes This category includes asbestos waste, waste photosensitive material, sealed container, other inevitably introduced hazardous waste. Such wastes are likely to be present in imported wastes. However, due to their considerable hazards, the limit value for such wastes is strictly restricted to 0.01% according to China's management regulations on prohibition of import and export of hazardous wastes.

3. Regularly restricted carried wastes Such wastes are inevitably introduced in imported wastes and mainly include regular solid wastes. According to the features of the sources of different wastes, different limit values are determined, such as 0.5%, 1%, 1.5% and 2%.

(2) Requirement on substances that are carried by or are components of the imported waste

This requirement is enforced to maximize utilization rate of imported wastes and facilitate environmental

protection. For example, the limit value for powder content in non-ferrous metal scraps is 0.1%; it is specified in the standard for compressed piece of scrap automobile that safety airbag, fire extinguisher, sealed pressure container, tires, engine oil, refrigerant shall be dismantled or removed from imported compressed piece of scrap automobile and the total weight of these components should not exceed 0.3% of the total weight of the scrap automobile; the standard for scrap vessels requires that the content of asbestos used as the thermally and electrically insulating material of the scrap vessel shall not exceed 0.08% of the light tonnage of the scrap vessel.

(2) Control of radioactive contamination

In current environmental protection control standards, radioactive contamination is controlled from three aspects: the first requirement is that imported waste shall not contain radioactive wastes; the second requirement on the α-ray and β-ray radioactive contamination level on the surface of the imported waste is that the average value of maximum detected level in any portion of 300cm^2 on the surface shall not exceed 0.04Bq/cm^2 for α-ray and 0.4Bq/cm^2 for β-ray; the third requirement is that the specific activity of radioactive nuclide in imported wastes shall be less than the specified value.

3.2.2 Main problems

In inspection and identification practice at ports, current environmental protection control standards have demonstrated several problems, as shown below:

(1) There is no requirement on external exposure penetrating radiation dose (γ) in radioactive contamination control requirements, which makes it difficult to achieve fast customs clearance and inspection. Currently, ports inspect radioactivity of imported wastes by measuring external exposure penetrating radiation dose with stationary and portable radioactivity inspection devices. In the imported waste inspection procedure developed by General Administration of Quality Supervision, Inspection and Quarantine, measurement of external exposure penetrating radiation dose is one of important inspection items. However, current environmental protection control standards do not include this control requirement, so the environmental protection control standards do not meet the requirement of the inspection standard.

(2) Current environmental protection control standards include various discrete clauses of control requirements on hazardous wastes. Indicator categories include prohibitive wastes and strictly restricted wastes. Waste categories also include both specific types and general groups, making it difficult to understand the requirements in practice. It's necessary to integrate relevant contents on the premise that import of hazardous wastes is strictly controlled.

(3) The control requirements on regular carried wastes are too loose. The fact that large quantities of unqualified imported wastes have been discovered and disposed of by ports shows that suppliers, importers, and domestic manufacturers do not place sufficient emphasis on the requirement on carried wastes specified in environmental protection control standards, resulting in frequent occurrence of excessive level of carried wastes in imported wastes. In addition, the control indicator or the proportion of regular carried wastes is too loose, resulting in excessive amount of carried wastes in imported wastes. Such carried wastes readily cause environmental pollution if improperly disposed of. Therefore, it's necessary to further strictly control the proportion of carried wastes so as to effectively prevent the entry of low-quality wastes.

4. Basic principles and method for standard revision

4.1 Basic principles

(1) Principle of prohibition of import of radioactive wastes

Radioactive contamination control of imported wastes is an important part of the last two standard revisions and an important inspection item for ports. In this standard revision, the radioactive control requirement in 2005 standard was maintained and the approach used in 1996 imported waste plastic standard was adopted by adding a requirement on external exposure penetrating radiation dose (γ).

(2) Principle of strict control of import of carried wastes

Carried wastes are divided into three types, strictly prohibitive waste, strictly controlled waste, and strictly restricted waste, to set up environmental protection control indicators.

The first type of carried waste should not be contained in or carried by solid wastes used as raw materials and may directly impose environmental hazard and human health hazard if contained in imported wastes, such as radioactive waste, weaponry, cannonball. Due to their considerable hazards and influences, it is clearly specified in the standards that import of such wastes is prohibited.

The second type of carried wastes refers to wastes that may be present in imported wastes under normal

conditions. Due to their considerable hazards, very strict restriction requirements have been imposed on this type of carried wastes according to China's management requirement on hazardous wastes. For example, the limit value for the waste categories listed in *National Catalogue of Hazardous Wastes* is 0.01%. The third type of carried wastes is regular waste inevitably introduced during production, collection, packaging and transportation of imported wastes. Such carried wastes are more or less present in imported wastes and may be controlled by setting strict requirement on proportion of carried waste. The limit value was determined to be 0.3%.

(3) Principle of proper control over quality of wastes

In addition to the control over carried wastes, it's also necessary to consider the quality of wastes. For example, several standards specify sensory requirements on wastes. Waste paper standard strictly restricts the introduction of incinerated or partially incinerated waste paper, waste paper contaminated by fire extinguishing agent. In view of actual condition in onsite identification practice, requirements on severely contaminated mixed waste paper and mixed waste plastic are specified in the standard. In non-ferrous metal scrap standard, the utilization efficiency of valuable substances is considered based on the requirement on the quality of the waste. Onsite identification cases indicate that it's necessary to control the proportion of powdery substance in non-ferrous metal scraps to directly reduce the powder hazards during loading, storage and handling of wastes. In the standards for metal and electrical appliance scraps, waste wires and cables, waste electric motors, scrap vessels, compressed piece of scrap automobile, there are also different requirements on the quality of the wastes.

4.2 Revision method

Literature search, comparison and analysis were performed with consideration of information collected from a great number of identification cases for various kinds of solid wastes over years, summary information on inspection and quarantine of waste solids at ports, and reasonable comments and suggestions proposed by experts.

5. Main technical contents of standard revision

5.1 Common contents revised in various standards

Since it's forbidden to import bone wastes in 2009 and import of waste fibers will be prohibited by the end of 2017, this revision is intended to cancel *Environmental Protection Control Standard for Imported Solid Wastes- Bone Wastes* (GB 16487.1-2005) and *Environmental Protection Control Standard for Imported Solid Wastes- Waste Fibers* (GB 16487.5-2005)

The common contents revised in the remaining 11 standards include the following:

(1) Preface. Revisions were made according to current requirements on standard drafting and revision as well as new situation about this standard revision.

(2) Scope Based on the current catalogue of solid wastes eligible for import, scope of application and name of wastes were adjusted to make them as consistent as possible with the catalogue of solid wastes eligible for import

(3) Normative references Considerable replacement revisions were made. First, the original identification standard for hazardous wastes GB 5085 was replaced by six identification standards GB 5085.1-GB 5085.6, mainly due to the fact that *Identification Standard for Hazardous Wastes- General Specifications* (GB 5085.7) includes identification procedure, mixing judgment rules and judgment rules after disposal of hazardous wastes and is not suitable for being cited in these revised standards; secondly, the original SN0570 inspection procedure was replaced by *Inspection Procedures for Radioactive Contamination of Imported Wastes as Raw Materials* (SN/T0570); thirdly, SN series standards in the original standards were replaced by a series of new SN/T1791 standards.

(4) Relevant requirements for hazardous wastes were integrated. First, hazardous wastes specified in the *National Catalogue of Hazardous Wastes* (such as asbestos wastes, waste photosensitive materials, wastes containing polychlorinated biphenyl) were not separately listed in the revised standards; secondly, wastes specified as prohibitive materials in current standards, such as "substances identified as hazardous wastes according to GB 5085" and "other wastes listed in *National Catalogue of Hazardous Wastes*" were integrated into the 0.01% indicator for strictly restricted carried wastes; thirdly, the clause about strictly restricted carried

wastes in current environmental protection control standards "other hazardous wastes sufficiently proved to be inevitably introduced during production, collection, packaging and transportation of imported wastes" was deleted.

(5) The requirements on radioactivity of wastes in standards were integrated, and an requirement on external exposure penetrating radiation dose (γ) for imported wastes was added.

A requirement on external exposure penetrating radiation dose (γ) for imported wastes was added into the radioactive contamination control requirements for the following reasons: since the issuance of the environmental protection control standards, various ports have attached great importance to the inspection of radioactivity by measuring external exposure penetrating radiation dose (γ) as the first inspection item; in the *Inspection Procedures for Radioactive Contamination of Imported Wastes as Raw Materials* (SN/T0570-2007) issued by General Administration o Quality Supervision, Inspection and Quarantine in 2007, it is specified that "normal natural background radiation level at the port of import plus 0.25μGy•h-1 is the import control threshold for external exposure penetrating radiation dose"; the requirement that "external exposure penetrating radiation dose (γ) shall not exceed 3 times of local natural background radiation level" was specified in the environment protection control standard for imported waste plastic issued in 1996; however, since 2016, various ports have discovered excessive traces of radioactive substances in several batches of cargoes that have been released by customs, partly due to the initial out-of-specification inspection result for external exposure penetrating radiation dose (γ). Therefore, a requirement that "the external exposure penetrating radiation dose (γ) shall be no more than +0.25μGy/h greater than the normal natural background radiation dose at the place where the port of import is located" was added into these standards.

(6) Control threshold for regular carried wastes in various standards was tightened to 0.3%.

(7) Inspection clauses were adjusted according to the revision contents for control requirements.

5.2 Different contents revised in control requirements of various standards

(1) *Environmental protection control standard for imported solid wastes as raw materials- smelt slag* (GB16487.2-2005)

(1) section 4.3: "It's forbidden to import vanadium-containing slag, ash and residue, including vanadium-containing spent catalysts" was added.

(2) spent catalyst was added into section 4.5 control requirements for regular carried wastes.

(2) *Environmental protection control standard for imported solid wastes as raw materials- wood and wood article wastes* (GB16487.3—2005)

(1) enumeration of powdery material was added into the control clause for regular carried wastes.

(3) *Environmental protection control standard for imported solid wastes as raw materials- waste and scrap of paper and paperboard* (GB16487.4—2005)

(1) section 4.3: "It's forbidden to import unsorted, mixed waste paper" was added.

(2) examples of restricted regular carried wastes were added, such as aluminum-plastic composite bag, thermo sensitive paper, asphalt-coated moisture-proof paper, self-adhesive paper, oiled paper, mixed waste paper.

(4) *Environmental protection control standard for imported solid wastes as raw materials- waste and scrap of steel and iron* (GB16487.6—2005)

(1) an example of restricted regular carried wastes- powdery material was added.

(2) "4.6 containers and pipelines that have stored liquid or semi-solid hazardous chemicals and their scraps should be cleaned before import; the importer should report the main components of the hazardous chemicals that have been stored or transferred by the containers and pipelines to the inspection authority" in the original standard was deleted.

(5) *Environmental protection control standard for imported solid wastes as raw materials- non-ferrous metal scraps* (GB16487.7-2005).

(1) the particle size of carried powdery waste in non-ferrous metal scraps was specified and powdery material with a size not more than 2mm was determined as the target of control.

(2) types of powdery materials were added, such as dust, sludge, crystalline salt, peeled metal oxide.

(3) "4.6 containers and pipelines that have stored liquid or semi-solid hazardous chemicals and their scraps should be cleaned before import; the importer should report the main components of the hazardous chemicals that have been stored or transferred by the containers and pipelines to the inspection authority" in the original standard was deleted.

(6) No revision was made to *Environmental protection control standard for imported solid wastes as raw materials- waste electric motors* (GB16487.8—2005).

(7) No revision was made to *Environmental protection control standard for imported solid wastes as raw materials- waste wires and cables (G*B16487.9—2005).

(8) *Environmental protection control standard for imported solid wastes as raw materials- metal and electrical appliance scraps* (GB16487.10-2005).

(1) the provision "4.6 the recyclable material in the imported metal and electrical appliance scraps shall not be less than 80% of the total weight of the metal and electrical appliance scraps, and the content of the reusable metal shall not be less than 60% of the total weight of the metal and electrical appliance scraps " in the original standard was revised to "the content of the reusable metal in the imported metal and electrical appliance scraps shall not be less than 80% of the total weight of the metal and electrical appliance scraps".

(9) *Environmental Protection Control Standard for Imported Solid Wastes- Vessels and Other Floating Structures for Breaking Up* (GB 16487.11-2005)

(1) the *Catalogue of Hazardous Waste Chemicals* and the *Catalogue of Highly Toxic Chemicals* in normative references were replaced by the *Catalogue of Hazardous Chemicals* issued in 2015 by 10 departments including General Administration of Quality Supervision, Inspection and Quarantine, and Ministry of Industry and Information Technology.

(2) the meaning of W_{waste} in section 4.7 was revised as the total weight of other carried wastes in the ship.

(10) *Environmental protection control standard for imported solid wastes as raw materials- waste and scrap of plastics* (GB16487.12—2005)

(1) it was specified in the scope of application that "excluding unsorted, mixed waste plastic, uncompressed waste foamed plastic, waste and scrap of compact discs".

(2) the definition of waste and scrap of plastic was revised as thermoplastic tailings, cuttings and defective products generated during plastic production and plastic product processing.

(3) section 4.5 "imported used plastic containers shall be crushed and cleaned to the extent that there is no obvious odor and stain" in the original standard was deleted.

(4) enumeration of "thermosetting plastic, waste and scrap of compact disc, other plastics containing metal coating, uncompressed waste foamed plastic, other unsorted, mixed waste plastics" was added into the control clause for regular carried wastes.

(11) *Environmental protection control standard for imported solid wastes as raw materials- compressed piece of scrap automobile* (GB16487.13—2005)

(1) enumeration of oil sludge and oil stain was added into the 0.01% threshold for strictly restricted carried wastes.

(2) "non-metal materials that are components of the scrap automobile (such as tires, seats and cushions) should be removed from the compressed piece of scrap automobile; the total weight of these components should not exceed 0.3% by weight of the compressed piece of the scrap automobile" was added.

6. Analysis of environmental benefits of these standards

By raising the bar for environmental approval, these revised standards effectively control import of foreign garbage, prevent unusable wastes from entering China and safeguard national ecological and environmental safety and human health.