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**Technical specification for recycling waste lead acid
battery**

废铅酸蓄电池回收技术规范

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Technical specification for recycling waste lead acid battery

1 Scope

This Standard specifies operational technology and management requirements for collection, storage, transportation, transfer of recycling waste lead acid battery in social circulation field (hereinafter referred to as waste battery).

This Standard is applicable to the recycling and management of waste battery from "social sources".

This Standard is not applicable to recycled waste battery or used lead acid battery returned to the factory for reuse.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 2900.41, *Electrotechnical terminology - Primary and secondary cells and batteries*

GB 13392, *The vehicle mark for road transportation dangerous goods*

GB 15562.2, *Graphical signs for environmental protector solid waste storage (disposal) site*

GB 18597, *Standard for pollution control on hazardous waste storage*

GB 21668, *Provisions of vehicles for the carriage of dangerous goods with regard to their specific constructional features*

National Hazardous Waste List (Order No. 39 of the Ministry of Environmental Protection)

Implementation Plan for Extended Producer Responsibility System (issued by Office of the State Council [2016] No. 99)

Measures for Administration of Hazardous Waste Business Permits

waste battery centralized storage site

3.9 transport

the process of using special transportation equipment to transfer waste battery from the temporary storage location to the centralized storage site, including consolidation, distribution, handling, loading-unloading

3.10 special transport equipment

transportation equipment that meets the functions of windproof, rainproof, anti-corrosion, anti-leakage

3.11 transfer

the process of removing the collected waste battery from the centralized storage site through sorting, packaging, storage, transportation and other activities

3.12 secondary lead

an enterprise that specializes in the harmless reuse of waste battery with a hazardous waste business license using waste lead-acid batteries as raw materials

3.13 producers

lead acid battery manufacturer

3.14 extended producer responsibility

the resource and environmental responsibility undertaken by producer and importer for his products extend from the production process to product design, circulation and consumption, recycling, waste disposal

3.15 social sources

come from the field of social circulation, with the characteristics of scattered sources, unfixed output and complex types, which corresponds to the concentrated sources in the industrial field

4 Requirements

4.1 General requirements

4.1.1 Producer shall, according to the requirements of *Implementation Plan for Extended Producer Responsibility System*, establish a recycling system of "sell

of the positive and negative poles.

4.3.2.3 Damaged waste battery shall be stored separately in acid-resistant plastic container. According to the requirements of GB 18597, stick a label of hazardous waste (see Figure 2).

4.3.2.4 There shall be complete warehousing records, ledger and other information. And keep for at least 1 year.

4.3.2.5 It is forbidden to dump electrolyte without authorization, dismantle, shatter, or discard waste battery.

4.3.2.6 The storage volume shall not exceed 10t.

4.4 Transportation

4.4.1 The waste battery transportation organization shall develop a detailed transportation plan and route. Develop accident emergency plans. Be equipped with accident emergency as well as personal protective equipment and items.

4.4.2 Transport vehicles shall be treated with simple anti-corrosion and anti-seepage treatment and equipped with acid-resistant storage containers.

4.4.3 Before transportation, intact batteries shall be neatly stacked on the tray. Use plastic film packaging to perfect it. Damaged waste battery and electrolyte shall be stored separately in acid-resistant storage containers. They are not allowed to be mixed.

4.4.4 During loading-unloading of waste battery, it shall be handled with care. Throwing, rolling and heavy pressure are strictly prohibited.

4.5 Centralized storage

4.5.1 Storage site

4.5.1.1 The storage site shall be constructed and managed in accordance with the relevant requirements of GB 18597.

4.5.1.2 The storage site shall be in an urban industrial plot and comply with local environmental protection and regional development plans. The construction project of the newly built centralized storage site shall pass the environmental impact assessment.

4.5.1.3 The storage scale shall match the capacity of the storage site. The storage area shall not be less than 500m². The storage time of waste battery shall not exceed 1 year.

4.5.1.4 It shall, in accordance with GB 15562.2, set up warning sign (Figure 4)

to prohibit non-professional staff from entering.

4.5.1.5 The storage place shall be divided into loading-unloading area, temporary storage area, storage area for intact waste battery and storage area for damaged waste battery. Mark them well.

4.5.1.6 The storage site shall have a wastewater collection system, so as to collect the liquid spilled from the waste battery during the handling process.

4.5.2 Storage requirements

4.5.2.1 The storage organization shall obtain the business license for hazardous waste such as waste lead-acid batteries, of which the code is HW49 (900-044-49) in "National Hazardous Waste List", according to the latest version of *Measures for Administration of Hazardous Waste Business Permits*.

4.5.2.2 There shall be packaging tools that meet the requirements of national environmental protection standards or technical specifications, temporary and centralized storage facilities and equipment.

4.5.2.3 It shall formulate relevant systems and methods such as waste battery's centralized storage management methods, operating procedures, pollution prevention measures, accident emergency rescue measures.

4.5.2.4 Operators shall be equipped with personal protective equipment in 4.3.2.1.

4.5.2.5 The transported waste battery shall enter the loading-unloading area first. Use forklift for loading-unloading. Then it is transported by forklift to the floor scale to weigh. After weighing, transport to the temporary storage area by forklift. Then check the state of the waste battery. Make a record.

4.5.2.6 Sort and store the inspected waste battery. Stack neatly.

4.5.2.7 The collected overflow liquid shall be transported to the acid electrolyte treatment station. Self-disposal is not allowed.

4.5.2.8 It is forbidden to dump electrolyte without authorization, dismantle, shatter, or discard waste battery.

4.5.2.9 Refer to the relevant regulations of GB/T 26493 for storage signs, storage records, safety protection and pollution control. Storage records are kept for at least 3 years.

4.5.2.10 The storage site shall be equipped with accurate weighing facilities. Calibrate them regularly.

4.5.2.11 Necessary monitoring equipment shall be installed at the entrance and

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