Technical Specification on Centralized Disposal of Medical Waste
(Trial)

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Chapter I General Provisions

1.1 Purpose and principle

This specification is formulated for the purpose of implementing the Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution, the Law of the People's Republic of China on Prevention and Control of Infectious Diseases and the Regulations on the Administration of Medical Waste, preventing environmental pollution during the temporary storage, transportation and disposal of medical waste, preventing the spread of diseases and protecting human health. Medical waste disposal should follow the principles of environmental health risk prevention, safety and harmless, and waste reduction.

1.2 Scope of application

1.2.1 This specification specifies the technical requirements for the temporary storage, transportation and disposal of medical waste in the process of centralized disposal, the requirements for the training and safety protection of relevant personnel, the prevention and emergency measures for emergencies, and the special requirements for the management of medical waste during major epidemics.

1.2.2 For the centralized disposal of medical waste, the "incinerator temperature" and "residence time" indexes determined in this specification shall be implemented; for the decentralized disposal of medical waste, the "incinerator temperature" and "smoke residence time" indexes of "hospital medical waste" in Table 2 of the Pollution Control Standard for Hazardous Waste Incineration (GB18484) shall be
implemented; for the simultaneous disposal of medical waste and hazardous waste, the "incinerator temperature" and "smoke residence time" indexes of "hazardous waste" in Table 2 of Pollution Control Standard for Hazardous Waste Incineration (GB18484) shall be implemented. Other requirements not specified in this specification shall be in accordance with the pollution control standard for hazardous waste incineration.

1.2.3 This specification is not applicable to the temporary storage and transportation of narcotic, mental, radioactive, toxic drugs and their related waste discarded by medical and health institutions. They shall comply with relevant national regulations.

Pollution control of abandoned radioactive sources shall be carried out in accordance with relevant regulations on prevention and control of radioactive pollution.

Regulations on classified collection and packaging of medical waste, standards for special packaging materials, containers and warning signs will be issued separately.

1.2.4 This specification is applicable to medical waste generators and centralized disposers (including transporters) in medical treatment, prevention, health care, family planning services, medical research, medicine, teaching, autopsy and other related activities.

1.3 Normative references
The provisions contained in the following standards and documents shall constitute the provisions of this specification by reference.
National List of Hazardous Waste
Classification Catalogue of Medical Waste
GB3095 Atmospheric Environmental Quality Standards
GB3838 Environmental Quality Standards for Surface Water
GB5085.3 Identification Standard for Hazardous Waste Identification of Leaching Toxicity
GB8978 Integrated Wastewater Discharge Standard
GB15562.2 Graphic Signs for Environmental Protection - Solid Waste Storage (Disposal) Site
GB18484 Pollution Control Standard for Hazardous Waste Incineration
GB18598 Pollution Control Standard for Hazardous Waste Landfill
GB19217 Technical Requirements for Medical Waste Transfer Vehicles
When the above standards and documents are revised, the latest version shall be used.

1.4 Definition

The following definitions apply to this specification:

1.4.1 Medical waste: this specification adopts the definition of medical waste specified in Article 2 of the Regulations on the Administration of Medical Waste, and the specific classification directory shall be implemented in accordance with the National List of Hazardous Waste and the Classification Catalogue of Medical Waste jointly formulated by the health administrative department and the environmental protection administrative department of the State Council.

1.4.2 Transportation

It refers to the process that the medical waste transporter (usually also the disposer) uses special vehicles (or in special cases, approved vessels) to deliver the medical waste directly from the medical waste generating unit to the centralized disposal site of the medical waste disposal unit according to the requirements of this specification.

1.4.3 Temporary storage

It refers to the process that the medical waste generating unit and the disposal unit store the delivered medical waste in a special place or facility within the unit that meets the specific requirements.

1.4.4 Hand over

It refers to the process that the generating unit of medical waste transfers the temporarily stored medical waste to the waste carrier and signs on the hazardous waste transfer form (for medical waste) with the carrier for confirmation.

1.4.5 Transfer container/barrel

A special hard container for holding sealed medical waste. The container is used to transport medical waste by the medical waste transport vehicle, so that the packaged medical waste does not directly contact with the vehicle compartment or is directly exposed to the external environment, or it can prevent the waste from polluting the compartment and the external environment in case of damage of the packaging bag.

1.4.6 Packing bag
Soft bags used for primary packaging of medical wastes except for damaging wastes and meeting certain requirements of anti-seepage and tear strength.

1.4.7 Disposal
It refers to the process that medical waste disposal unit conducts safe, harmless and reduction treatment of medical waste in accordance with specified technical measures and requirements.

1.4.8 High temperature disposal
This specification refers to high temperature incineration, high temperature pyrolysis incineration and other similar solid waste disposal technologies.

1.4.9 Final disposal
It refers to the process in which medical waste disposal units carry out safe landfill of medical waste and its residues after harmless disposal.

Chapter II Temporary storage of medical waste

2.1 Storehouse
The medical and health institutions with inpatient beds shall establish a special temporary storehouse for medical waste, which shall meet the following requirements:

2.1.1 It must be separated from the domestic waste storage area, with rain proof devices, and the foundation height shall ensure that the facilities are not impacted or soaked by rain and flood;

2.1.2 It must be separated from medical area, food processing area and personnel activity intensive area to facilitate the loading and unloading of medical waste, the access of loading and unloading personnel and transport vehicles;

2.1.3 Strict sealing measures shall be taken, and special personnel shall be assigned for management to prevent non staff from entering and leaving, as well as safety measures against rats, mosquitoes and flies, cockroaches, theft and children’s contact;

2.1.4 The ground and the 1.0-meter-high dado must be treated for seepage prevention. The ground has good drainage performance and is easy to clean and disinfect. The generated waste water should be directly discharged into the medical waste water disinfection and treatment system in medical and health institutions
through pipelines. It is forbidden to directly discharge the generated waste water into the external environment;

2.1.5 Water supply tap should be set outside the storehouse for cleaning of temporary storage storehouse;

2.1.6 Avoid direct sunlight in the storehouse, with good lighting equipment and ventilation conditions;

2.1.7 Warning signs of "No Smoking and Eating" shall be posted in the storehouse;

2.1.8 According to the requirements of GB15562.2 and the special warning signs for medical waste formulated by the health and environment protection departments, warning signs for hazardous waste and medical waste shall be set at the obvious places outside the storehouse;

See Appendix A for the specific requirements of warning signs for special medical waste in temporary storage storehouse.

2.2 Special temporary storage cabinet (box)

When it is difficult to set up independent temporary storage storehouse for medical waste in medical and health institutions without inpatient beds, such as outpatient department, clinic, medical teaching and scientific research institutions, special temporary storage cabinet (box) for medical waste shall be set up, and the following requirements shall be met:

2.2.1 The temporary storage cabinet (box) of medical waste must be separated from the storage place of domestic waste, with rainproof and anti lifting measures, and meet the fire safety requirements;

2.2.2 Put the medical waste in the turnover box and put it in the special temporary storage cabinet (box). Cabinets (boxes) shall be sealed and safety measures shall be taken, such as locking and fixing devices, so that irrelevant personnel cannot move, and warning signs shall be set on the outside according to GB15562.2 and Appendix A;

2.2.3 Refrigerated cabinets (boxes) can be used as temporary storage cabinets (boxes) for medical waste; they can also be made of metal or hard plastic, with certain strength and leakage resistance.
2.3 Hygiene requirements

2.3.1 The temporary storage storehouse of medical waste shall be disinfected and washed every day after the waste is cleared and transported, and the washing liquid shall be discharged into the disinfection and treatment system of medical waste water in the medical and health institutions.

2.3.2 The temporary storage cabinet (box) of medical waste shall be disinfected once a day.

2.4 Temporary storage time

2.4.1 The medical waste shall be prevented from corruption and odor in the temporary storage storehouse and special temporary storage cabinet (box), and the daily medical waste shall be handed over in one day as possible.

2.4.2 If the daily medical waste shall be handed over in time and the local maximum temperature is higher than 25 ℃, the medical waste shall be temporarily stored at low temperature, and the temporary storage temperature shall be lower than 20 ℃, and the maximum time shall not exceed 48 hours.

2.5 Management system

2.5.1 Medical and health institutions shall formulate relevant rules and regulations, working procedures and emergency treatment measures for the temporary storage and management of medical waste.

2.5.2 The temporary storage storehouse of medical and health institutions and the storage place of special temporary storage cabinets (boxes) for medical waste shall be subject to the supervision and inspection of local environment protection authorities and health authorities.

Chapter III Handover of medical waste

3.1 When receiving the medical waste, the personnel transporting the medical waste shall visually check whether the medical and health institutions pack and mark the medical waste according to the regulations, and put it in the turnover box, and shall not open the packaging bag to take out the medical waste. For the medical waste whose package is damaged, whose appearance is polluted or which is not packed in the turnover box, the carrier of medical waste shall require the medical and health
institutions to repack and mark it and put it in the turnover box. If the carrier refuses to package the medical waste in accordance with the regulations, the carrier has the right to refuse to deliver and report to the local environmental protection department. Chemical medical waste shall be disposed by a hazardous waste disposal unit with business qualification entrusted by medical and health institutions, and medical waste delivery personnel of the disposal unit without corresponding permission shall not accept chemical medical waste.

3.2 The waste handed over by the medical and health institutions for disposal shall be managed by the hazardous waste transfer sheet. The municipal environmental protection department divided into districts shall examine and approve the medical waste transfer plan. After the transfer plan is approved, the simplified *Hazardous Waste Transfer Form* (for medical waste only) can be used for the daily transfer of medical waste between the medical waste generating unit and the disposal unit. After the change of medical and health institutions, disposal units and delivery methods, the medical waste transfer plan shall be re approved.

The *Hazardous Waste Transfer Form* (for medical waste only) shall be made in duplicate, one for each month. It shall be filled in jointly by the medical waste delivery personnel of the disposal unit and the medical waste management personnel of the medical and health institution when handing over. The medical and health institution and the disposal unit shall keep it respectively for 5 years.

See Appendix B for the format of *Hazardous Waste Transfer Form* (for medical waste only).

3.3 The medical waste transported by each vehicle shall be managed by the medical waste transportation registration card, which shall be filled in and signed by the medical waste management personnel of the medical and health institutions at the time of handover.

When the medical waste is transported to the disposal unit, the receiving personnel of the disposal plant shall confirm that the quantity of medical waste filled in the registration card is true and accurate and sign for receipt.

See Appendix C for the format of *Medical Waste Delivery Registration Card*.

3.4 The medical waste disposal unit shall fill in and submit the monthly report of medical waste disposal to the local environmental protection department.
The medical waste generating unit and disposal unit shall fill in the annual report of medical waste generation and disposal, and submit the annual report of the production and disposal of the previous year to the local environmental protection department in January of each year.

See Appendix D for the format of monthly report on medical waste disposal and Appendix E for the format of annual report on medical waste generation and disposal.

Chapter IV Transport of medical waste

4.1 Transport vehicle requirements

4.1.1 Special vehicles shall be used for medical waste transportation. The car body shall be separated from the cab and sealed; the car body shall meet the air tightness requirements, the inner wall shall be smooth and flat, easy to clean and disinfect; the car body materials shall be waterproof and corrosion-resistant; the bottom of the car body shall be liquid proof, and shall be equipped with a drainage and collection device for cleaning sewage.

Transport vehicles shall meet the technical requirements for medical waste transfer vehicles (GB19217).

4.1.2 Transport vehicles shall be equipped with
(1) Text of this specification
(2) Hazardous waste transfer form (for medical waste only)
(3) Medical waste delivery registration card
(4) Transportation route map
(5) Communication equipment
(6) List and telephone number of medical waste generating unit and its management personnel
(7) List and telephone number of emergency plan and contact units and personnel
(8) Tools, disinfectors and medicines for collecting medical waste
(9) Spare medical waste bags and sharp tool boxes
(10) Spare personal protective equipment

4.1.3 Graphic and text identification
(1) Special warning signs must be set at the front, rear and both sides of the carriage of medical waste transport vehicles;
(2) Both sides of the cab of the transport vehicle shall be painted with the name of the medical waste disposal unit and the transport vehicle number.

4.1.4 If the medical waste transport vehicle needs to be used for other purposes, it shall be thoroughly disinfected, and approved by the environmental protection department. The number of the medical waste transport vehicle shall be cancelled, and the vehicle use change procedures shall be handled again in accordance with the traffic management regulations of the public security.

4.2 Delivery requirements

4.2.1 The medical waste disposal unit shall, in accordance with the overall medical waste disposal plan, equip a sufficient number of transport vehicles and standby emergency vehicles.

The medical waste disposal unit shall designate the person in charge of each transport vehicle and be responsible for the process of medical waste transportation.

4.2.2 Delivery frequency: for the medical and health institutions with inpatient beds, the disposal unit must send vehicles to collect on site every day to achieve daily cleaning; for the medical and health institutions with inpatient beds that cannot achieve daily cleaning, the requirements of paragraph 2 of Article 2.4 of this specification shall be followed.

For medical and health institutions without inpatient beds, such as outpatient departments and clinics, medical waste disposal units shall collect medical waste at least once every two days.

4.2.3 Transportation route: try to avoid densely populated areas and traffic congestion roads.

4.2.4 The packaged medical waste shall be stored in reusable special turnover boxes (barrels) or disposable special packaging containers. The special turnover box (barrel) or disposable special packaging container shall comply with the provisions on standards and warning signs of special packaging materials and containers for medical waste.

4.2.5 The loading and unloading of medical waste shall be carried out by machinery as much as possible, and the turnover box shall be neatly loaded into the vehicle, so as to minimize manual operation; if manual operation is required, personnel protection shall be done.
4.2.6 Before the delivery of medical waste, the disposal unit must check the vehicle condition of each delivery vehicle to ensure that the vehicle condition is good before leaving. The person in charge of the transport vehicle shall check whether each transport vehicle is equipped with the auxiliary items required in 4.1.2 of this specification to ensure it is complete.

4.2.7 Medical waste transport vehicles shall not take other irrelevant personnel, or load or mix other goods, animals and plants.

4.2.8 When the vehicle is running, the compartment door shall be locked to ensure safety, and the medical waste shall not be lost, scattered or unpacked.

4.3 Disinfection and cleaning requirements

4.3.1 The medical waste disposal unit must set up a cleaning place for medical waste transport vehicles and sewage collection and disinfection facilities.

After each delivery, the inner wall of the carriage shall be disinfected in the disposal unit, and sealed for at least 30 minutes after spraying disinfectant.

The reusable turnover boxes for medical waste transportation shall be disinfected and cleaned in the medical and health institutions or medical waste disposal units after each transportation.

4.3.2 Medical waste transport vehicles shall be cleaned at least once every two days (in winter in the north and in water shortage areas, the cleaning times can be reduced appropriately), or when the inner wall or (and) outer surface of the carriage is polluted, it shall be cleaned immediately. It is forbidden to wash medical waste transport vehicles in social vehicle washing places.

4.3.3 The cleaning sewage shall be collected into the sewage disinfection treatment facilities. It is not allowed to clean the inner wall when the sewage collection and disinfection treatment conditions are not available. It is prohibited to discharge the cleaning sewage to the environment at will. The vehicle can be put into use again after being washed and dried.

4.4 Special requirements for waterway transportation

The transportation of medical waste in water area shall comply with the relevant provisions of Article 15 of the Regulations on the Administration of Medical Waste and the following requirements:
4.4.1 For the medical and health institutions built on islands or flowing on water, the medical waste generated by them can not be transported by land, and can be transported in water area with the approval of the local environmental protection department at or above the municipal level.

The infectious medical waste transported in the water area must be disinfected on the spot at the place where it is produced, and can only be transported after it is confirmed that the disinfection effect specified by the health department has been achieved.

4.4.2 Medical waste transported in water area must be packed into a special sealed waterproof plastic turnover box (bucket). The cover of the turnover box (barrel) shall be fastened, and the turnover box (barrel) shall be loaded into the ship. Appropriate safety measures shall be taken on the ship to make the loaded turnover box stable.

In order to ensure that the turnover box (bucket) containing medical waste will not sink to the bottom after an accident of falling into the water, the load proportion of the turnover box (bucket) shall be less than \(1 \times 10^3\) kg / \(m^3\).

4.4.3 Special vessels with special warning signs shall be used to load medical waste, and the inner wall of the warehouse shall be smooth and flat, easy to clean and disinfect. The cleaning sewage shall be collected and sent to the medical waste disposal unit for treatment, and shall not be directly discharged into the water body.

In addition to fishing tools, the ship shall also be equipped with documents, supplies and equipment in accordance with Article 4.1.2.

The special vessel for medical waste loading shall not carry other irrelevant personnel, or load or mix other goods, animals and plants.

4.5 Professional skills and occupational health protection of transport personnel

The medical waste disposal unit shall train the transport personnel in relevant professional skills and occupational health protection, and meet the following requirements:

4.5.1 Professional skills
(1) Familiar with relevant environmental protection laws and regulations, master the rules and regulations of medical waste management formulated by environmental protection department;

(2) Familiar with the responsibilities of this position and understand the importance of this specification;

(3) Familiar with the requirements of medical waste classification and packaging identification, and the correct operation procedures of handling and handling medical waste containers (such as packaging bags, sharp tool boxes, etc.) and turnover boxes (buckets);

(4) Know how to take emergency measures and report in time in case of spillover and scattering of medical waste during transportation.

4.5.2 Occupational health protection

(1) Understand the harm of medical waste to environment and health, and the importance of insisting on using personal health protective equipment;

(2) The transport personnel shall wear protective gloves, masks, work clothes, boots and other protective articles during transportation;

(3) Physical examination of transport personnel: 2 times / year, if necessary, preventive immunization.

4.6 Emergency measures

4.6.1 In case of a large amount of medical waste overflowing and scattering due to overturning or collision (sinking or overturning), the transport personnel shall immediately contact the emergency group of the unit and request the support of local public security traffic police, environmental protection or urban emergency linkage center. At the same time, the following emergency measures shall be taken by the transport personnel:

(1) Immediately request the public security traffic police to set up an isolation area in the polluted area, forbid other vehicles and pedestrians to pass through, so as to avoid the spread of pollutants and the injury to pedestrians;

(2) Collect, clean and disinfect the spilled and scattered medical waste. For liquid spills, adsorption materials are used for absorption;
(3) Cleaning personnel shall wear protective clothing, gloves, masks, boots and other protective articles when cleaning. After cleaning, the tools and protective articles shall be disinfected;

(4) If the body (skin) of the cleaning personnel is injured accidentally during the operation, the treatment measures shall be taken in time and the personnel shall be treated in the hospital;

(5) The cleaning personnel shall also disinfect and clean the contaminated site ground.

4.6.2 When taking the above emergency measures for the accident, the disposal unit must report the accident to the local environmental protection and health department. After the accident is handled, the handling unit shall write a written report to the above two departments, including:

(1) Time, place, cause and brief process of the accident;

(2) The type and quantity of leaked and scattered medical waste, the cause of pollution and the name of the generating unit of medical waste;

(3) Hazards and potential impacts caused by leakage and dispersion of medical waste;

(4) Emergency response measures and results taken.

Chapter V High temperature heat treatment of medical waste

The state promotes the centralized disposal of medical waste. At present, the centralized disposal of medical waste should adopt high-temperature heat treatment technology, which is applicable to all medical waste except chemical waste.

5.1 Site selection of disposal plant

5.1.1 The site selection of the disposal plant shall conform to the overall planning and environmental protection planning of the local city, and the environmental impact assessment shall be carried out.

5.1.2 The treatment plant is not allowed to build the surface water class I and class II functional areas specified in GB3838 and the ambient air quality class I functional areas specified in GB3095.

5.1.3 The site selection of the disposal plant shall comply with the provisions of Article 24 of the Regulations on the Administration of Medical Waste, and shall be far
away from residential (Village) areas and traffic arteries. It is required that the distance between the boundary of the disposal plant and the boundary of the above areas and similar areas shall be more than 800m.

The site selection of the disposal plant shall comply with the regulations on pollution prevention and control of the national drinking water source protection zone.

The straight-line distance between the disposal plant and workplace such as factory and enterprise shall be more than 300m, and the surface water area shall be more than 150m.

5.1.4 The location of the disposal plant shall be located in the downwind direction of the city's perennial dominant wind direction or maximum wind frequency as far as possible.

**5.2 Facility requirements of the disposal plant**

5.2.1 The medical waste disposal unit shall set warning signs at the entrance and exit of the disposal plant, temporary storage facilities, disposal sites, etc. according to GB15562.2 and the *Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste* formulated by the health department and the environment protection department.

5.2.2 The medical waste disposal unit shall set up an isolation enclosure at the legal boundary to prevent irrelevant personnel, poultry and pets from entering.

5.2.3 The temporary storage warehouse and cleaning and disinfection room of medical waste disposal plant shall be designed with full closure and micro negative pressure, and the fresh air volume shall be 30m³/person. H. The indoor air must enter the medical waste incineration (pyrolysis incineration) furnace for incineration.

5.2.4 The centralized medical waste disposal plant in a city with a population of more than 200000 shall ensure the normal operation of its medical waste disposal facilities throughout the year.

5.2.5 The medical waste disposal plant shall be equipped with centralized disinfection treatment facilities for sewage. The washing sewage from vehicles, turnover boxes, temporary storage places and disposal site shall be disinfected first, and then discharged into the centralized disinfection treatment facilities in the disposal plant.
5.2.6 The medical waste disposal plant shall be equipped with sludge dehydration or drying treatment facilities, which shall be burned after dehydration or drying.

5.2.7 The medical waste disposal plant shall be equipped with automatic weighing device to measure the disposal amount of medical waste.

5.2.8 The medical waste disposal unit shall establish a qualified computer information management system for medical waste, and regularly submit data to the competent environmental protection department.

5.3 Receiving and recording of medical waste

5.3.1 When the medical waste is transported to the disposal unit, a specially assigned person shall check the registration card of medical waste transportation. Whether the registered quantity is consistent with the actual received quantity shall be signed for confirmation after verification, indicating that the waste has been received.

5.3.2 If it is found that the received quantity is inconsistent with the registered quantity, the receiving personnel shall immediately report to the person in charge of the disposal unit, and the person in charge shall organize to find out the situation. At the same time, the disposal unit shall respectively report to the local environmental protection and health authorities in written form, indicating the situation and the measures taken.

5.3.3 The medical waste delivery registration card shall be kept for 5 years for inspection by local environmental protection department and health department.

5.3.4 The medical waste disposal plant shall count the quantity or weight of medical waste received every day and input it into the computer information management system.

5.4 Temporary storage

5.4.1 If the medical waste entering the disposal plant cannot be disposed immediately, it shall be stored in the turnover box in the temporary storage room of medical waste.

5.4.2 The temporary storage warehouse for medical waste shall have good anti-seepage performance and be easy to clean and disinfect.

The sewage collection device must be attached to collect the sewage generated from cleaning and disinfection of temporary storage warehouse.
5.4.3 When the temporary storage temperature of medical waste in the disposal plant is $\geq 5 \, ^\circ\text{C}$, the temporary storage time of medical waste shall not exceed 24 hours; when the temporary storage temperature of medical waste is $< 5 \, ^\circ\text{C}$, the temporary storage time of medical waste shall not exceed 72 hours.

5.5 Technical requirements for disposal

5.5.1 The treatment capacity of medical waste incineration (pyrolysis incineration) furnace shall meet the following requirements:

(1) In principle, a centralized medical waste disposal plant shall be built in cities at or above the prefecture level;

With the approval of the provincial administrative department of environmental protection, two can be built, and three can be built in mega cities.

(2) For each centralized medical waste disposal plant, the number of incinerators in normal operation shall not exceed three.

5.5.2 Medical waste incineration (pyrolysis incineration) furnace shall meet the following requirements:

(1) Automatic feeding without damage to the package;

(2) Set automatic temperature and furnace pressure control and over temperature safety protection device;

(3) It is equipped with online monitoring and recording system for operating conditions (temperature, furnace pressure, CO, O$_2$, etc.);

(4) There is a control system to ensure that medical waste cannot bypass the normal incineration process;

(5) Comply with relevant occupational health and safety standards.

5.5.3 main disposal process and operation requirements

(1) Before medical waste enters the high-temperature incinerator (pyrolysis) furnace, it’s forbidden to open the medical waste packaging bag to take out the medical waste, and the medical waste shall be in good packaging state.

(2) At the beginning of medical waste incineration, it shall be ensured that when the incineration system reaches the specified temperature, the operation, feeding and disposal of medical waste can be started.
(3) The high temperature incineration disposal device shall be equipped with a second combustion chamber, and the residence time of the second combustion chamber when the flue gas temperature is ≥ 850 °C shall be ≥ 2.0s, and the oxygen concentration in the flue gas shall be 6% - 10% (dry flue gas).

(4) The flue gas purification system shall include: quench device for dioxin regeneration control, acid gas control device and dust removal device. Bag type dust remover is preferred for dust removal device.

(5) The height of exhaust funnel, incineration effect of medical waste incineration facilities and the emission of air pollutants from incineration (pyrolysis incineration) furnace shall meet the corresponding requirements of GB18484 Pollution Control Standard for Hazardous Waste Incineration.

(6) The flue gas automatic continuous monitoring device of the medical waste incineration facility shall be able to monitor CO, smoke, SO₂ and NOx projects, and the online monitoring and recording system shall be connected with the local environmental protection bureau to ensure that it is in normal condition.

5.6 Final disposal of incineration residues

5.6.1 The fly ash generated by the dedusting equipment of medical waste must be collected and stored in a closed manner, and be solidified and disposed in accordance with GB 18598 Pollution Control Standard for Hazardous Waste Landfill.

5.6.2 The slag generated by incineration can be sent to the domestic waste landfill for landfill disposal (except for the hazardous waste after detection).

5.6.3 Solid waste generated by other flue gas purification devices shall be identified and judged as hazardous waste according to GB5085.3. If it is hazardous waste, it shall be disposed as hazardous waste, otherwise, it shall be carried out according to article 5.6.2.

5.7 Monitoring and recording of operation parameters and disposal effect

5.7.1 Record the quantity and weight of each batch of medical waste incineration.

5.7.2 Flue gas temperature of secondary combustion chamber: continuously monitor the temperature before and after the secondary combustion section of flue gas of secondary combustion chamber.
Flue gas residence time: determined by monitoring flue gas emission rate, reviewing incineration design documents and inspecting product structure size.

5.7.3 In accordance with the provisions of GB18484, the heat loss rate of incineration residue shall be monitored at least once every six months.

5.7.4 Continuously and automatically monitor CO, smoke, SO₂ and NOₓ in the exhaust gas, for the smoke blackness, hydrogen fluoride, hydrogen chloride, heavy metals and their compounds specified in Table 3 of GB18484 that cannot be monitored by the automatic continuous device at present, at least once a quarter shall be sampled and monitored according to the monitoring management requirements of GB18484.

5.7.5 Record the disposal of final residues of medical waste, including the quantity, disposal method and receiving unit of incineration residues and fly ash.

5.7.6 The medical waste disposal unit shall regularly report the monitoring data of the above operation parameters and disposal effect. The storage period of monitoring data is 3 years.

5.8 Professional skills and occupational health protection of operators

The medical waste disposal unit shall train the operators of the disposal unit on professional skills and safety protection, and meet the following standard requirements:

5.8.1 Professional skills

(1) Operation of disposal equipment, including startup and shutdown of equipment;

(2) Operation and inspection of control, alarm and indication system, and corrective measures if necessary;

(3) The best operating temperature, pressure, pollutant emission concentration, rate and the conditions to keep the equipment in good operation;

(4) Daily or regular inspection, cleaning, lubrication and other maintenance of equipment;

(5) In case of equipment failure and alarm, equipment operation and emergency measures to be taken, and timely report;

(6) Operation records and maintenance records of equipment under normal, abnormal and emergency conditions.

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5.8.2 Occupational health protection

(1) Understand the harm of medical waste to environment and health, and the importance of using personal protective equipment;

(2) Operators shall wear protective gloves, masks, work clothes, boots and other protective articles during operation. If there is danger of liquid or molten substance splashing out, they shall also wear goggles.

5.9 Centralized disposal of medical waste in remote counties (banners)

In addition to the high temperature heat treatment technology, other medical waste treatment technologies approved by the provincial environmental protection and health departments can be used in the centralized medical waste treatment facilities built separately in remote counties (banners). The control of main process parameters in the treatment process shall meet the design requirements of the treatment equipment.

Chapter VI Special requirements for medical waste disposal during the epidemic period of major infectious diseases

During the epidemic period of major infectious diseases issued by the health administrative department under the State Council, according to the provisions of Article 24 (1) of the Law of the People's Republic of China on Prevention and Control of Infectious Diseases, class A infectious diseases that need isolation treatment, AIDS patients in class B infectious diseases, pulmonary anthrax in anthrax and other class a diseases that need isolation treatment added by the health administrative department under the State Council according to the actual situation Or class B (such as SARS) infectious disease patients, suspected patients in the treatment, isolation observation, diagnosis and related activities of highly infectious medical waste centralized disposal, applicable to the provisions of this chapter, the provisions of this chapter do not apply to the relevant provisions of other parts of this specification.

6.1 Classified collection and temporary storage

6.1.1 Medical waste shall be collected by special personnel and packed in double layers, and the packaging bag shall be specially marked with highly infectious waste.
6.1.2 The temporary storage place of medical waste in medical and health institutions shall be dedicated for storage and management, and shall not be mixed with general medical waste and domestic waste.

The temporary storage place shall be sprayed with 0.2% - 0.5% peracetic acid or 1000mg/L-2000mg/L chlorine containing disinfectant or mopped to disinfect the wall or floor by specially assigned person, once in the morning and afternoon every day.

6.2 Transportation and disposal

6.2.1 The disposal unit must use fixed special vehicles when transporting medical waste, which shall be in the charge of special personnel, and shall not be mixed with other medical waste.

The transportation time should be staggered from rush hour to rush hour, and the transportation route should avoid densely populated areas; each time the transportation vehicle is unloaded, it must be sprayed with 0.5% peracetic acid for disinfection.

6.2.2 Medical waste shall be disposed by high-temperature incineration. The medical waste transported to the disposal site shall be disposed as soon as possible, and the temporary storage time in the disposal unit shall not exceed 12 hours at most.

6.2.3 An isolation area for medical waste disposal must be set up in the disposal plant. The isolation area shall be clearly marked and irrelevant personnel shall not enter.

6.2.4 The isolation area of the disposal plant must be sprayed or mopped with 0.2% - 0.5% Peracetic acid or 1000mg/L - 2000mg/L chlorine containing disinfectant to the wall, ground or object surface for disinfection once in the morning and afternoon every day.

6.3 Personnel health protection

6.3.1 The protection requirements of the operators of the transport and incineration disposal device shall meet the first level protection requirements specified by the health department, that is, they must wear work clothes, isolation clothing, protective boots, work caps and protective masks, and the personnel who dispose the waste in short distance shall also wear goggles.
6.3.2 Wash and disinfect hands and take a bath immediately after each transportation or disposal operation. For hand disinfection, use 0.3% - 0.5% Iodophor disinfectant or quick hand disinfectant to knead for 1-3 minutes.

6.4 Emergency response requirements
When the disposal capacity of the centralized medical waste disposal unit cannot meet the requirements of medical waste disposal during the epidemic, other emergency medical waste disposal facilities can be used to increase the temporary medical waste disposal capacity with the approval of the environmental protection department.

**Additional description**
This specification is proposed by the Science and Technology Standards Department of the State Environmental Protection Administration.

This specification is under the jurisdiction of the State Environmental Protection Administration.

This specification is the first issue.

This specification is drafted by the following organizations: Institute of environmental standards, Chinese Academy of Environmental Sciences, Guangzhou solid waste management center.

This specification shall be interpreted by the State Environmental Protection Administration.
Appendix A
(Normative appendix)

Sign of temporary storage place for medical waste

The temporary storage place of medical waste shall be equipped with warning signs of medical waste, with the following patterns:

Requirement:
1. Material: solid, durable, weather resistant and drenching resistant
2. Color: background color yellow
Text and letter black
3. Size:
   Warning sign with equal triangle side length ≥ 400mm
   Main sign height ≥ 150 mm
   Chinese character height ≥ 40mm
   English text height ≥ 40mm
Appendix B
(normative appendix)

Form of hazardous waste transfer sheet (for medical waste only)

Name of medical and health institution:

Medical waste disposal unit:

<table>
<thead>
<tr>
<th>Date</th>
<th>Infectious waste and others</th>
<th>Hazardous waste</th>
<th>Signature of handover personnel of medical and health institutions</th>
<th>Signature of waste carrier</th>
<th>Handover time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume (box)</td>
<td>Weight (kg)</td>
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</tbody>
</table>

Time: month year

---23---
Appendix C
(normative appendix)
Medical waste delivery registration card

Transport vehicle No.:    Person in charge of transport vehicle:

<table>
<thead>
<tr>
<th>Name of medical and health institutions</th>
<th>Infectious waste and others</th>
<th>Hazardous waste</th>
<th>Signature of handover personnel of medical and health institutions</th>
</tr>
</thead>
<tbody>
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<td>Volume (box)</td>
<td>Weight (kg)</td>
<td>Volume (box)</td>
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</table>

Total

Statement of medical waste receiving personnel in the disposal plant: I declare that I have received the above amount of medical waste, and the packaging and identification are in good condition. If there is any problem, please indicate here:

Receiving time: hh-hh, mm / DD / yyyy

Signature of receiver:
Appendix D
(normative appendix)
Medical waste disposal monthly report

Centralized medical waste disposal unit: (seal)
Handled by: Reviewed by: Filled in on: mm / DD / yyyy

<table>
<thead>
<tr>
<th>Medical waste generator</th>
<th>Infectious waste and others</th>
<th>Hazardous waste</th>
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</thead>
<tbody>
<tr>
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<td>Volume (box)</td>
<td>Weight (kg)</td>
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Total

Note: this form is submitted by the centralized medical waste disposal unit on a monthly basis.
Appendix E
(normative appendix)
Annual report of medical waste generation and disposal (20 years)
Centralized medical waste disposal unit: (seal)
Handled by: Reviewed by: Filled in on: mm / DD / yyyy

<table>
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<th>Hazardous waste</th>
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</thead>
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<td>Weight (kg)</td>
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<td>Total</td>
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</tbody>
</table>

Note: this form is filled in by the medical generating unit and the centralized disposal unit respectively.