Guide on Management and Technical on Emergency Treatment and Disposal of Medical Waste Caused by COVID-19 (Trial)

1. General requirements
In order to prevent COVID-19, timely, orderly, efficient and harmless disposal of medical waste caused by COVID-19, standardize the management and technical requirements for emergency disposal of pneumonia epidemic medical waste, and protect the ecological environment and human health, the guide is specially formulated. Local competent departments of ecology and environment at all levels and emergency disposal units of medical waste can refer to the guide and relevant standards and specifications, and determine the technical route and corresponding management requirements of emergency disposal of medical waste during the COVID-19 according to local conditions.

The types and scope of solid waste included in the management of medical waste during the COVID-19, as well as the health and epidemic prevention in the process of collection, storage, transfer and disposal, shall be implemented in accordance with the relevant requirements of the competent departments of health.

2. Compilation basis
I. Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Waste
II. Law of the People's Republic of China on Prevention and Treatment of Infectious Diseases
III. Regulation on Responses to Public Health Emergencies （Order No. 376 of the State Council）
IV. Regulations on the Administration of Medical Waste (Order No. 380 of the State Council)
3. Emergency response management requirements

(1) Improve the coordination mechanism of emergency response. Under the unified leadership of the people's government at the same level, the local competent departments of ecology and environment at all levels, in accordance with the principle of "combination of unified management and hierarchical management, combination of division of labor and joint prevention and control, combination of centralized disposal and nearby disposal", cooperate with the competent departments of health, housing and urban-rural construction, industry and informatization, transportation, public security, etc., to jointly organize the emergency disposal of medical waste from pneumonia epidemic.

(2) Coordinate the resources of emergency disposal facilities. According to the emergency disposal capacity of medical waste in cities, mobile medical waste disposal facilities, hazardous waste incineration facilities, domestic waste incineration facilities, industrial kilns, etc. are included in the emergency disposal resource list of medical waste in COVID-2019. The competent departments of ecology and environment at the municipal level of each district shall make a good judgment on the disposal capacity of medical wastes, and put forward suggestions to the people's government at the corresponding level to initiate emergency disposal under the condition of meeting the
requirements of health and epidemic prevention put forward by the competent departments of health. Emergency disposal facilities shall be activated upon the consent of the people's government at the corresponding level. For cities with gaps in medical waste disposal capacity, through the provincial epidemic prevention and control work leading group and joint prevention and control work mechanism or under the guidance of the provincial competent department of ecological environment, can also coordinate other cities in the province or neighboring cities with surplus medical waste disposal capacity to establish a cross-regional coordination mechanism for emergency disposal.

(3) **Standardize emergency response activities.** All medical waste generation, collection, storage, transfer and emergency disposal units shall properly manage and dispose of medical waste under the guidance of local people's government, health, ecology and environment, housing and urban-rural development, transportation and other competent departments. The disposal process shall be operated in strict accordance with the relevant technical specifications for medical waste disposal to ensure the disposal effect, the normal and stable operation of pollution control facilities, the discharge of water, air and other pollutants up to the standard, and the prevention of disease infection and environmental pollution. The emergency disposal unit shall regularly report the emergency disposal of medical waste to the local competent department of ecology and environment, the local competent department of health at or above the county level, and may implement daily or weekly reports according to the situation.

(4) **Timely release emergency disposal information.** The local competent departments of ecology and environment at all levels shall, in accordance with the relevant requirements of the people's governments at the corresponding levels, do a good job in releasing relevant information.

4. Technical route of emergency response

(1) **Scientific selection of emergency response methods.** According to the local conditions, local governments can choose the technical route of emergency disposal of medical waste in case of COVID-2019. Medical wastes generated by pneumonia patients infected in novel coronavirus should be disposed by high-temperature incineration or non-incineration methods such as high-temperature steam disinfection, microwave disinfection and chemical disinfection to ensure the disposal effect.
(2) Reasonably determination of the emergency disposal facilities to be designated. For emergency disposal of medical waste, priority should be given to the use of centralized medical waste disposal facilities within the administrative region. When the existing disposal capacity in the region cannot meet the needs of emergency disposal of medical waste from pneumonia epidemic, the emergency plan shall be immediately started, and the medical waste shall be disposed of by the emergency disposal facilities listed in the emergency disposal resource list, and designated management shall be implemented, or transferred to the centralized medical waste disposal facilities in the adjacent region for disposal according to the cross-regional coordination mechanism of emergency disposal. For special reasons, if there are no conditions for centralized disposal, medical waste can be incinerated on site according to the plan determined by the local people's government.

(3) To manage and dispose medical waste by classification and diversion. During the period of emergency disposal, it is recommended that infectious medical waste and other medical waste generated in the process of prevention and control of the COVID-2019 should be classified and separated for management. Centralized medical waste disposal facilities and movable medical waste disposal facilities should be given priority to the disposal of infectious medical waste generated in the prevention and control of pneumonia epidemic. Other medical wastes can be diverted to other emergency disposal facilities for disposal.

(4) To facilitate on-site emergency response activities of medical institutions. Medical institutions can use movable medical waste disposal facilities for emergency disposal of medical waste on their own or in neighboring medical institutions, which could exempt environmental impact assessment, medical waste business license and other procedures. However, disposal sites should be reasonably set up to avoid environmentally sensitive areas such as drinking water source protection areas and concentrated residential areas, and reported to the municipal health department and the ecology and environment department in charge of districts. The supplier of movable medical waste disposal facilities shall ensure that the medical waste disposal effect meets the requirements of relevant standards and technical specifications.

5. Key technical points of emergency disposal

(1) Collection and temporary storage. The designated hospitals of pneumonia
patients infected by novel coronavirus should strengthen the classification, packaging and management of medical wastes. It is suggested that infectious medical wastes generated should be disinfected under the guidance of the health department, packaged in strict accordance with the Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste, and then placed in designated transfer barrels (boxes) or disposable special packaging containers. Red "infectious waste" logo should be printed or pasted on the packaging surface. Damaging medical wastes must be packed into sharp boxes, sealed with yellow waste bags to avoid damage to the packaging. When medical waste needs to be disposed of by hazardous waste incineration facilities, domestic waste incineration facilities, industrial furnaces and other emergency disposal facilities, the packaging size shall meet the size requirements of the corresponding feeding equipment. Conditional medical and health institutions can implement special storage and special management of temporary storage places for infectious medical wastes generated, and do not mix with other medical wastes and domestic waste. The storage place shall be disinfected according to the method and frequency required by the competent department of health, and the temporary storage time shall not exceed 24 hours. The flushing liquid in the storage place shall be discharged into the medical wastewater disinfection and treatment system in the medical and health institutions for treatment.

(2) Transportation. For the transportation of infectious medical waste generated in the process of prevention and control of the COVID-2019, special medical waste transportation vehicles shall be used, or vehicles temporarily modified according to the requirements of medical waste transportation vehicles shall be used. In the process of medical waste transfer, electronic transfer form or paper form can be used according to the local actual situation. Before transfer, the route and requirements for transfer shall be determined. Transportation routes should avoid densely populated areas as far as possible, and transportation time should avoid rush hour. Medical waste should be transferred to disposal facilities within 48 hours. The transportation vehicles shall be disinfected according to the method and frequency required by the competent health department after each unloading. Where conditions permit, fixed special vehicles can be arranged to transport infectious medical wastes generated in the prevention and treatment of pneumonia epidemic separately, not mixed with other medical wastes, fill in transfer forms separately from other medical wastes, and establish standing books.
(3) **Disposal.** Medical waste disposal units shall give priority to the collection and disposal of infectious medical waste generated in the process of prevention and control of pneumonia. The collection frequency of medical waste can be increased appropriately. 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. An isolation area for medical waste disposal must be set up in the disposal unit. The isolation area shall be clearly marked, and irrelevant personnel shall not enter. The isolation area of the disposal unit must be in the charge of a specially assigned person, and the walls, floors and surfaces of objects shall be sprayed or mopped for disinfection according to the methods and frequency required by the competent department of health.

(4) **Special requirements for other emergency disposal facilities.** Hazardous waste incineration facilities, domestic waste incineration facilities, industrial furnaces and other non-medical waste professional disposal facilities to carry out pneumonia epidemic medical waste emergency disposal activities, should be in accordance with the requirements of the health department in charge of health and epidemic prevention work. Special unloading and receiving areas, cleaning and disinfection areas shall be designated for medical waste, necessary rainproof, drenching and leakage prevention measures shall be added, special driving routes shall be planned for medical waste transportation vehicles, and special personnel shall be assigned to manage them. Warning and warning restriction measures shall be set up at the receiving site. The feeding method should adopt special feeding equipment to prevent secondary cross-contamination caused by contact between medical wastes and other incinerators. Pay attention to the compatibility of medical waste and other incineration materials to keep the process equipment running smoothly and controllable. Technical operators shall receive necessary technical training.

(5) **Personnel health protection.** During the collection, storage, transfer and disposal of medical waste, the disinfection of medical waste and related facilities, personal protection of operators and daily temperature monitoring shall be strengthened in accordance with the relevant requirements of the competent department of health. Where conditions permit, medical waste collection, storage, transfer and disposal front-line operators can be arranged to live together.

(6) **Other technical points.** Other key technical points for emergency disposal of