

(Translation)

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(Official Emblem)

## Ministerial Regulation

Hygienic Waste Management

B.E.2560 (2017)

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By virtue of the provisions of section 5 paragraph one of the Public Health Act B.E.2535 (1992) and section 6 paragraph one of the Public Health Act B.E.2535 (1992) amended by the Public Health Act (Volume 2) B.E.2550 (2007), the Minister of Public Health, by the advice of the Public Health Committee, issues this Ministerial Regulation, as follows.

Clause 1. This Regulation shall come into force one hundred eighty days following that of its promulgation in the Government Gazette.

### Chapter 1

#### General Provisions

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Clause 2. In this Act,

“general waste” means waste paper, waste cloth, waste food, waste goods, waste materials, plastic bag, food container, soot, animal dung or carcasses, including any other thing swept away from road, market place, animal farm, or other places, which does not include:

- (1) infectious waste;
- (2) toxic or hazardous waste from community; and
- (3) unused items, waste produced by industrial activity, raw material waste, material that is rendered useless during a manufacturing process, degraded goods, and hazardous waste in accordance with laws on factory;

“recyclable waste” means general waste that can be re-used or reprocessed into products;

“infectious waste” means infectious waste as defined in the Ministerial Regulation on Infectious Waste Disposal;

“toxic or hazardous waste from community” means waste that is toxic or hazardous due to various activities held in a community, which is contaminated or containing toxic chemical, flammable, oxidizing, peroxide, irritant, corrosive, highly-sensitive, explosive, mutagenic substances, including any other substances or things that may or tend to be hazardous to an individual, animals, plants, properties or environment, but not include general waste, infectious waste, radioactive waste and other hazardous waste in accordance with laws on factory;

“leachate” means any liquid that has percolated through matter or liquid emitted from general waste, which may contain soluble or suspended solids;

“dwelling” means a building, or part of a building where a several families live individually in a certain unit;

“waste producer” means dwellers and the owner or the possessor of a building, establishment, service center, industrial factory, market place, or other places in which waste is generated.

Clause 3. No person shall discharge, dump, discard, or cause to exist in a public place or way of sewage or waste, except in the place provided by the local government.

Prescribing that the local government shall provide an area in a public place or way where people can discharge, dump, or discard of waste or arrange waste management in accordance with this Regulation or criteria prescribed by the Minister and promulgated in the Government Gazette.

Clause 4. Prescribing that the following organizations or persons shall collect, haul or dispose of general waste in accordance with the criteria, procedure, and conditions prescribed in this Regulation:

(1) local government;

(2) local government in conjunction with other government agency or other local government under a mutual agreement in accordance with section 18 paragraph two;

(3) persons appointed by the local government to collect, haul, or dispose of general waste under its control and supervision in accordance with section 18 paragraph 3;

(4) persons with a license obtained from local official to collect, haul, or dispose of general waste as a business or for reciprocal benefits under section 19.

During the general waste management process, there shall be at least two officers, whose qualifications meet the requirements prescribed by the Minister and promulgated in the Government Gazette, to monitor the process.

## Chapter 2 Waste Collection

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Clause 5. For the purpose of waste collection, the Regulation prescribes that waste producers shall segregate waste, at least into general waste and toxic or hazardous waste from the community, as well as sorting recyclable waste from non-recyclable waste.

The local government may issue local regulations prescribing that organic waste or other types of waste shall be segregated from general waste.

Clause 6. General and recyclable waste bags or containers shall meet the following specifications:

(1) general and recyclable waste should be contained in bags made of plastic or other rigid and leak proof materials impervious to moisture, and strong enough to prevent tearing under normal use condition with an appropriate size that is easy to handle;

(2) general waste and recyclable waste should be contained in containers made of materials that are easy to clean, rigid, durable, impervious to moisture, which have tight lids to prevent disease carrying animals and insects with an appropriate size that is easy to handle, load and unload.

Recyclable waste bags and containers must be marked that the waste is recyclable in a size and color clearly visible.

For the purpose of maintaining cleanliness and organizing general and recyclable waste collection, hauling, or disposal, the Regulation prescribes that the

Minister shall have the power to promulgate in the Government Gazette, prescribing texts or signs to be labeled on waste bags or containers under (1) and (2).

Clause 7. Prescribing that waste producers shall collect general and recyclable waste in bags or containers described in Clause 6. In the case the waste is collected in bags, the size of the bags must be appropriate to the quantities of waste produced and the bag must be tightly tied or completely closed to prevent spillage. In the case the waste is collected in containers, the size of the containers must be appropriate to the quantities of waste produced and the containers must be regularly cleaned.

Clause 8. The owner or possessor of a dwelling, condominium, dormitory, or hotel of which the number of rooms is from eighty, or area of utility space is from four thousand square meters, or the owner or the possessor of the building, organization, service establishment, manufacturing plant, market place, or other places in which the daily quantity of general waste is from two cubic meters, shall be required to provide a general waste storage area, general and recyclable waste containers, or a large size of general and recyclable waste containers according to Clause 9, Clause 10, or Clause 11 as deemed appropriate or as prescribed by local officials by the advice of the Public Health Committee.

Clause 9. General waste storage area shall conform to the following standards and hygiene conditions:

(1) a separate building or room that has impermeable surfaces, or general and recyclable waste containers of which the size is as large as described in Clause 11 and able to contain waste for at least two days;

(2) the floor and the walls of the separate building or room described in (1) must be flat, water resistant, made from durable materials, easy to maintain, inaccessible for disease-carrying animals and insects, and installed with ventilation equipment;

(3) there should be waterspout or drainage to collect wastewater for further treatment in accordance with the laws;

(4) an entrance that affords easy access for staff in charge of handling waste;

(5) the general waste storage area must be clearly defined and marked "General Waste Storage Area" in a size that is clearly visible, and the area must be regularly cleaned.

The general waste storage area must be located in the place that allows easy access for waste collection and transport and must not be situated in the proximity of

water resource for consumption and food preparation areas as prescribed by local officials by the advice of the Public Health Officers.

Clause 10. General and recyclable waste containers to be placed in the location under Clause 8 shall meet the following standards and specifications:

(1) made from materials that are easy to clean, rigid, durable, impervious to moisture with tight lids to prevent disease carrying animals and insects, and come in an appropriate size that is easy to handle, load and unload.

(2) marked "General Waste" or "Recyclable Waste," as the case may be, in a size and color clearly visible.

For the purpose of general and recyclable waste collection, hauling, and disposal, the Minister shall have the power to promulgate in the Government Gazette prescribing an emblem or symbol to be printed on waste containers under paragraph one.

Clause 11. Large general and recyclable waste containers of which the volume is from two cubic meters shall meet the following standards and hygiene conditions:

(1) made from materials that are easy to clean, rigid, durable, impervious to moisture, easy to load and unload with tight lids to prevent disease carrying animals and insects, and with leachate collection systems to keep contaminants from leaking into the environment.

(2) must be regularly cleaned, at least once a week.

Large general and recyclable waste containers must be placed in suitable locations affording easy access for waste collection and not obstructing traffic flows. They should be placed in a specific area that has a flat and hard-standing floor, which is easy to clean, with good drainage or wastewater management system to collect wastewater for further treatment in accordance with the laws. The containers must not be situated in the proximity of water resource for consumption and food preparation areas as prescribed by local officials by the advice of Public Health officers.

Clause 12. Prescribing that the local government shall provide general and recyclable waste containers under Clause 10 or large general and recyclable waste containers under Clause 11 in a public place or way as deemed appropriate or as prescribed by the local government.

Clause 13. Agencies or persons under Clause 4 paragraph one shall appoint ancillary workers to be in charge of general waste collection and segregation and provide a supply of personal protective equipment appropriate to their job.

The workers under paragraph one shall be eligible for an annual medical check-up and trainings regarding hygiene practices and work safety in accordance with the criteria, procedure, and conditions prescribed by the local officials by the advice of Public Health officers.

Clause 14. In the case agencies or persons under Clause 4 paragraph one have arranged an area for general waste segregation, the area shall meet the following standards and hygiene conditions:

(1) a specific area of a size appropriate to the quantities of general waste to be segregated, of which the surrounding area is regularly cleaned and organized;

(2) offering sufficient lighting to allow complete visibility;

(3) offering sufficient air ventilation;

(4) providing of a clean restroom, toilet, and wash basin sufficient for use and for the body washing purpose;

(5) preventing disease-carrying animals and insects;

(6) preventing dust, odor, noise, vibration, or other operations that may cause nuisance, or harmful effect to the health of dwellers in accordance with related laws;

(7) providing of well-maintained fire protection equipment that is ready for use at all time;

(8) installed with wastewater collection and treatment system. Wastewater carried off to the environment shall meet the wastewater standards described in related laws.

In the case a community enterprise or community group operates non-commercial waste segregation, the community enterprise or community group shall have to inform the local government responsible for the locality and allow the local government to monitor the operation to ensure that it meets the hygiene conditions.

Clause 15. No business operators or possessors of manufacturing plants, which are the origin of general waste, shall intermix unused items, waste produced by industrial activity, raw material waste, material that is rendered useless during a manufacturing process, degraded goods, and hazardous waste in accordance with laws on factory with other general waste.

Chapter 3  
General Waste Hauling

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Clause 16. Agencies or persons under Clause 4 paragraph 1 shall appoint ancillary workers to be in charge of general waste collection and hauling and provide a supply of personal protective equipment appropriate to their job, equipment or apparatus that helps prevent accidents that may happen during the operation, fire protection equipment and apparatus, as well as medical equipment in general waste collection and hauling vehicles.

General waste collection and hauling workers under paragraph one shall be eligible for an annual medical check-up and trainings regarding hygiene practices and work safety in accordance with the criteria, procedure, and conditions prescribed by the local officials by the advice of Public Health Officers.

Clause 17. Agencies or persons under Clause 4 paragraph one shall process waste collection in accordance with the following criteria and hygiene conditions:

(1) manage to collect general waste separately, or designate days to collect each category of general waste described in Clause 5 or as prescribed by the local government;

(2) issue control measures of general waste hauling services to prevent illegal waste dumping as promulgated in the Government Gazette by the Minister;

(3) use a general waste collection vehicle that meets the specifications under Clause 18 and the vehicle must be well-maintained in accordance with the following standards and hygiene conditions:

(a) daily clean the vehicle and equipment used in general waste hauling. The place where the cleaning is taking place shall have a flat, hard-standing, sloped floor, which is easy to clean and allows easy drainage of water with wastewater drainage or wastewater management system for further treatment as described by the laws, and protective measures shall be applied to prevent nuisance and harmful effect to the health of dwellers;

(b) provide an area to park waste hauling vehicle of a size appropriate to the vehicle and the area must be cleaned regularly.

Clause 18. General waste hauling vehicles shall meet the following criteria and hygiene conditions:

(1) the garbage box body should be rigid, durable, leak proof, tightly closed, and easy to load, unload, and clean. The garbage box body should not be placed too high or should be at the level that is safe to the health of workers during unloading general waste;

(2) prevent contamination from leaking leachate or have a tray to prevent spillage of leachate during handling and transportation, and to catch wastewater for further treatment;

(3) mark a symbol on or attach a neon sign to the vehicle which shall not cause nuisance and be visible from far away. The neon sign must be turned on at all time during the operation.

In the case that the worker is a person under Clause 4 (3), the person shall label the name of the local government on both sides of the garbage box body in the size that is clearly visible, and attach a plate indicating his name, address, and telephone number to the area that is clearly visible.

In the case the worker is a person under Clause 4 (4), the person shall attach his name and license number of the licensee to both sides of the garbage box body of the general waste hauling vehicle in the size that is clearly visible, and attach a plate indicating his name, address and telephone number to the area that is clearly visible.

Clause 19. In the case of necessity, the agency or person under Clause 4 paragraph one may provide a waste transfer station.

The waste transfer station under paragraph one shall meet the following criteria and hygiene conditions:

(1) a building impervious to moisture of a size appropriate to the quantities of waste deposited, with sufficient lighting and air passage for work;

(2) preventing of disease-carrying animals or insects, dust, odor, noise, vibration, or other operations that may cause nuisance, or harmful effect to the health of dwellers in accordance with related laws;

(3) installed with wastewater collection and treatment systems. Wastewater carried off to the environment shall meet the wastewater standards described in related laws. This is except for the building that is not required to have wastewater treatment system.



Chapter 4  
General Waste Disposal

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Clause 20. Agencies or persons under Clause 4 paragraph one shall appoint ancillary workers to be in charge of general waste disposal and provide a supply of personal protective equipment appropriate to their job, equipment or apparatus that helps prevent accidents that may happen during the operation, fire protection equipment and apparatus, as well as medical equipment located conveniently close to the disposal site.

General waste disposal workers under paragraph one shall be eligible for an annual medical check-up and trainings regarding hygiene practices and work safety in accordance with the criteria, procedure, and conditions prescribed by the local officials by the advice of Public Health Officers.

Clause 21. Agencies or persons under Clause 4 paragraph one shall operate general waste disposal in accordance with the following procedure:

(1) dispose of general waste by using either of the measures prescribed in Clause 22. The workers shall be educated about appropriation and possibility of general waste disposal systems before applying them. There shall be a control measure to monitor each general waste disposal operation to ensure that it complies with hygiene conditions and general waste management in order to prevent harmless effect to the health of dwellers and environment;

(2) no intermixing of unused items, waste produced by industrial activity, raw material waste, material that is rendered useless during a manufacturing process, degraded goods, and hazardous waste in accordance with laws on factory, infectious waste, and toxic or hazardous waste from community with other general waste.

Clause 22. In disposing of general waste, any of the following methods shall be applied:

- (1) sanitary landfill;
- (2) incineration;
- (3) fertilizer and biogas production;
- (4) integrated waste disposal;
- (5) other methods promulgated in the Government Gazette by the Minister.

Clause 23. Sanitary landfill shall be operated in accordance with relating laws, study results under Clause 21 (1), and the following criteria and hygiene conditions:

(1) in a suitable location of a size appropriate to the quantities of waste that is to be landfilled, which shall not cause nuisance, or damage to a person or property. The criteria of location selection shall be based on the provisions promulgated by the Minister in the Government Gazette;

(2) the landfill site shall be surrounded by a buffer zone used for planting, transportation, and surface drainage installation in order to decrease scenery problems caused from landfills and unpleasant odor;

(3) a system to prevent contamination from leachate in the subsurface water by compressing the bottom and all sides of the ditch, as well as grounding it with a material that is impervious to moisture in accordance with the criteria and conditions promulgated by the Minister in the Government Gazette;

(4) a wastewater collection system at the bottom of the ditch to convey wastewater for further treatment, which is able to prevent contamination in the subsurface water, altogether with a leachate treatment process to meet the wastewater standards prescribed by relating laws;

(5) covering the waste with layers of soil or other types of material and close the ditch when it is full with layers of soil high at least sixty centimeters, or other suitable material to prevent odor, blowing litter and prevent from being a breeding site for disease-carrying animals and insects, as well as having negative effect to the environment;

(6) preventing of disease-carrying animals or insects, dust, odor, noise, vibration, or other operations that may cause nuisance, or harmful effect to the health of dwellers in accordance with related laws;

(7) arrangements of gas collection and ventilation systems, as well as gas burning system or vent gas reuse system in the landfill;

(8) a ditch to assess contamination in the groundwater. During the landfill operation, the workers shall report water quality assessment result in accordance with the criteria and procedure promulgated by the Minister in the Government Gazette.

Clause 24. Incineration shall be operated in accordance with relating laws, study results under Clause 21 (1), and the following criteria and hygiene conditions:

(1) in a suitable location of a size appropriate to the quantities of waste that is to be incinerated, with sufficient lighting and air passage;

(2) a general waste storage area in accordance with the criteria and hygiene conditions under Clause 9;

(3) the area shall be surrounded by a buffer zone used for planting, transportation, and surface drainage installation in order to decrease scenery problems caused from incineration and unpleasant odor;

(4) waste shall be incinerated at a temperature not less than eight hundred degree Celsius. It shall be a system to control the air emitted from the stack to meet the air pollution control standards in accordance with relating law;

(5) preventing of disease-carrying animals or insects, dust, odor, noise, vibration, or other operation that may cause nuisance, or harmful effect to the health of dwellers in accordance with related laws;

(6) providing a treatment of wastewater drained from the disposal system and other wastewater caused in the disposal site to ensure that it meets the standards prescribed in relating laws;

(7) providing an area to store bottom ash, which shall prevent negative effect to the environment, and provide a system to regularly dispose of the bottom ash by using the sanitary landfill method, which has a system to prevent contamination in the surface water and groundwater from leachate, or a safe system to utilize the bottom ash for other purposes;

(8) providing an area to store fly ash, which shall prevent negative effect to the environment, and provide a system to regularly dispose of the fly ash by using the sanitary landfill method, which has a system to prevent contamination in the surface water and groundwater from leachate, or a safe system to utilize the fly ash for other purposes;

Clause 25. Bio-fertilizer and biogas production shall be operated in accordance with relating laws, study results under Clause 21 (1), and the following criteria and hygiene conditions:

(1) in a suitable location;

(2) a general waste segregation system in order to create bio-fertilizer or biogas, which shall be in a building of a size appropriate to the quantities of waste produced, with sufficient lighting and air passage for the segregation;

(3) an odor treatment system for unpleasant odor caused by the waste stored in the general waste segregation building;

(4) preventing of disease-carrying animals or insects, dust, odor, noise, vibration, or other operations that may cause nuisance, or harmful effect to the health of dwellers in accordance with related laws;

(5) for general waste that has already been segregated from waste that can be produced into fertilizer, there shall be handled by a disposal system or the waste shall be transported to be disposed by the sanitary landfill, or incineration methods. For the recyclable waste, it may be reused for other purposes;

(6) providing a treatment for wastewater drained from the segregation and fertilizer production site to ensure that it meets the standards prescribed in relating laws;

(7) in case of biogas production, the anaerobic pond needs to work in a closure operation. The biogas shall be utilized and there shall be a gas burning system in the case that the biogas utilization system is not working.

Clause 26. Integrated waste disposal shall be operated by using more than one of the waste disposal methods, and shall be in accordance with the criteria and hygiene conditions under Clause 23, Clause 24, or Clause 25.

#### Transitional Provisions

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Clause 27. Agencies or persons under Clause 4 paragraph one, as the case may be, who operate general waste collection, hauling, or disposal services prior to the date this Ministerial Regulation comes into force, shall have to operate general waste collection and hauling services in the execution of this Ministerial Regulation within one year, following the date of enforcement of this this Ministerial Regulation, and general waste disposal services shall be operated in execution of this Ministerial Regulation within three years, following the date of enforcement of this Ministerial Regulation.

Clause 28. In the case that agencies or persons under Clause 4 paragraph one have been operating general waste collection and hauling services, but not yet operating general waste disposal services prior to the enforcement of this Ministerial Regulation, the agencies or the persons shall have to operate general waste disposal in execution of this Ministerial Regulation within three years, following the date of enforcement of this Ministerial Regulation.

Given on the 22<sup>nd</sup> Day of March 2017

Piyasakol Sakolsatayadorn

Minister of Public Health

Note:- The reason for the promulgation of this Ministerial Regulation is as follows.

Whereas section 6 of the Public Health Act B.E.2535 (1992) amended by the Public Health Act (Vol. 2) B.E.2550 (1997) prescribes that the Minister of Public Health by advice of the Public Health Committee shall have the power to issue Ministerial Regulations, designating criteria, procedure and measures to control or monitor businesses or operations in execution of the Act and to designate criteria, procedure, and measure to control or monitor general waste disposal in accordance with hygiene conditions for the purpose of health protection and people's sanitation behaviors and in order to prevent negative effect to the environment, as well as to designate standards for the living condition congruent with the livelihood of the people, and procedures to assess, or monitor, or improve factors that may have effect to the people's livelihood, it is therefore necessary to issue this Ministerial Regulation.