

[ **NCDPC, July 28, 2004** ]

**"RULES AND REGULATIONS GOVERNING THE COLLECTION, HANDLING, TRANSPORT, TREATMENT AND DISPOSAL OF DOMESTIC SLUDGE AND SEPTAGE" - A SUPPLEMENT TO THE IMPLEMENTING RULES AND REGULATIONS OF CHAPTER XVII - "SEWAGE COLLECTION AND DISPOSAL AND EXCRETA DISPOSAL AND DRAINAGE" OF THE CODE ON SANITATION OF THE PHILIPPINES (P.D. 856) ISSUED ON NOVEMBER 1995**

The Department of Health prescribes the following rules and regulations governing the COLLECTION, HANDLING, TRANSPORT, TREATMENT AND DISPOSAL OF DOMESTIC SLUDGE FROM CESSPOOLS, COMMUNAL SEPTIC TANKS, IMHOFF TANKS, DOMESTIC SEWAGE TREATMENT PLANTS/FACILITIES AND SEPTAGE FROM HOUSEHOLD SEPTIC TANKS - a supplement to the implementing rules and regulations of Chapter XVII "Sewage Collection and Disposal, Excreta Disposal and Drainage" of the Code on Sanitation of the Philippines (P.D. 856) issued on November 1995

*SECTION 1: Scope of Application* -These sanitation rules and regulations shall apply to all individuals, firms, public and private operators, owners and administrators engaged in the desludging, collection, handling and transport, treatment, and disposal of domestic sludge from cesspools, communal septic tanks, imhoff tanks, domestic sewage treatment plants/facilities and septage from household septic tanks.

*SECTION 2: Definition of Terms* -The following words and phrases used in these rules and regulations shall mean:

2.1 CESSPOOL - a covered, open-joint or perforated walled pit that receives raw sewage.

2.2 Conditioning - this is the process of dewatering the sludge with the addition of chemical and application of heat, e.g. chemical conditioning, heat treatment.

2.3 Dewatering - this is the process of reducing the moisture content of sludge to lessen the volume and odor, e.g. vacuum filter, centrifuge, belt filter press, filter press, sludge drying beds, lagoons

2.4 DEPARTMENT - The Department of Health

2.5 DESLUDGING - the process of cleaning or removing the accumulated domestic sludge or septage.

2.6 Disinfection - this is the process of destroying pathogenic organisms either by physical (e.g. application of heat) or chemical (e.g. chlorine application) means.

2.7 DOMESTIC SLUDGE - solid particle of domestic sewage, which settles at the bottom of the sedimentation tank and is digested by anaerobic bacteria, purely from domestic sources, exclusive of industrial and hazardous wastes.

2.8 DOMESTIC SEWAGE - wastewater composed of raw liquid and solid waste coming from residential and commercial uses, exclusive of industrial and hazardous waste.

2.9 ENVIRONMENTAL SANITATION CLEARANCE - the clearance issued by the Secretary of Health or his duly authorized representative allowing the collection, handling, transport, treatment and disposal of domestic sludge or septage.

2.10 HEAT DRYING - this is an operation that involves reducing water content by vaporization of water to the air from the wet sludge, e.g. flash dryer, spray dryer, rotary dryer, multiple hearth dryer, multiple effect evaporator.

2.11 IMHOFF TANK - a two-storey tank in which sedimentation is accomplished in the upper compartment and digestion of the settled solids is accomplished in the lower compartment.

#### 2.12 OPERATIONAL SERVICE AREA

2.12.1 Mobile - the area where the operator is allowed to engage in the collection, handling and transport of septage/sludge.

2.12.2 Stationary - the area where the operator is allowed to engage in treatment and disposal of septage/sludge.

2.13 SANITARY LANDFILL - refers to a waste disposal site designed, constructed, operated and maintained in a manner that exerts engineering control over significant potential environmental impacts arising from the development and operation of the facility.

2.14 SANITARY MANNER - the practice that ensures the health and safety of the workers, general public and the environment.

2.15 SANITARY PERMIT - the certification issued by the city or municipal health officer or sanitary engineer stating that the establishment complies with the existing minimum sanitation requirements upon evaluation or inspection conducted in accordance with Presidential Decree Nos. 522 and 856 and local ordinances.

2.16 SCUM - part of sewage that floats.

2.17 SECRETARY - The Secretary of Health.

2.18 SEDIMENTATION TANK - receptacle that allows the free settling of solid particle through gravity including the settling of suspended solid particle through chemical process.

2.19 SEPTAGE - the combination of scum, sludge and liquid from household septic tanks.

2.20 SEPTIC TANK - a water - tight receptacle, which receives the discharge of the plumbing system or part thereof, and is designed to accomplish the sedimentation and digestion of the organic matter in the sewage within the period of detention/retention.

2.21 SEWAGE TREATMENT PLANT - facility that treats/neutralizes sewage and domestic sludge and renders them acceptable to the receiving bodies of water.

2.22 SLUDGE DEWATERING - is the process of reducing the moisture content of domestic sludge.

2.23 STABILIZATION - this is the process of reducing pathogenic bacteria to eliminate offensive odor and inhibit the potential for putrefaction. Stabilization process includes biological reduction of volatile content (composting), chemical oxidation of volatile matter, chemical application like lime application to the sludge and the application of heat to disinfect or sterilize the sludge.

2.24 STABILIZED SLUDGE - state wherein a domestic sludge can no longer be broken down or undergo further decomposition.

2.25 THICKENING - this is the process of increasing the mass of the solid content of sludge by removing a portion of the liquid fraction, which may result to volume reduction of sludge, e.g. gravity thickening, flotation thickening, centrifugation, gravity belt thickening, rotary drum thickening.

### *SECTION 3: Environmental Sanitation Clearance -*

3.1 Any individual, firm or operator, government or private who will be engaged in the collection/desludging, handling, transport, treatment and disposal of sludge and septage is required to secure Environmental Sanitation Clearance (ESC) (*Annex 1\**) from the Secretary of Health or the Director of the concerned Center for Health Development (CHD) as his duly authorized representative prior to operation. Those who are currently engaged in the same activities are likewise required to secure the same clearance. Figure 1 shows the flowchart for securing ESC.

3.2 Operators or firms engaged in the operation of disposal site shall also secure ESC.

3.3 The notarized ESC application (*Annex 2\**) shall be filed with the City/Municipal Health Office that has jurisdiction over the operational service area. The application, together with the findings and recommendation of the City/Municipal Health Office shall then be forwarded to the CHD for validation. The ESC shall be issued only upon compliance with all the requirements.

3.4 The ESC is a prerequisite to the issuance of Sanitary Permit.

3.5 The ESC shall remain valid unless suspended or revoked by the CHD upon violation of any provisions of the rules and regulations.

3.6 Representative/agents of any individual or firm engaged in the operation of activities stipulated in Section 1 are not required to apply for an ESC but may be allowed to transact for the owner/operator, provided the following documents shall be submitted to the City/Municipal Health Office:

3.6.1 Memorandum of Agreement between the principal and the agent/representatives authorizing the latter to transact.

3.6.2 An authenticated copy of the ESC issued to the principal individual or firm by the CHD.

3.7 In relation to the above provision, the principal individual or firm shall update the CHD on its authorized agents/representatives.

*SECTION 4: Project Description* - In applying for the ESC, a project description (PD) shall be submitted to the host City/Municipal Health Office for initial evaluation. This will be forwarded to the concerned CHD for final validation. The PD shall discuss information on the operational process, environmental sanitation and site information i.e. the topography, geological conditions, and hydrology. (*See Annex 2-A and Annex 2-B for the Format of Project Description\**). Attached to the project description is sworn statement of accountability by the proponent / preparer / consultant.

*SECTION 5: Septage and Domestic Sludge Collection and Transport* - The septage and domestic sludge collection and transport systems shall be done in a sanitary manner to avoid nuisance to the public. The following conditions shall be strictly observed:

5.1 The collection vehicle used for the transport of septage and domestic sludge should be enclosed with leak proof body and lock to secure the septage and sludge, and can withstand an impact with another vehicle especially under urban motoring conditions.

5.2 The collection vehicle should be in good running condition in accordance with the Land Transportation Office (LTO) safety standards on roadworthiness.

5.3 The vehicle should be properly marked with the following information:

5.3.1 Company name and contact number

5.3.2 Logo

5.3.3 Body number

5.4 The transfer of septage and sludge from the original vehicle to another collection vehicle during transport is prohibited. However, when such transfer is unavoidable, transfer techniques including the loading and unloading shall be included in the operational process and submitted to the CHD to ensure the protection of health and environment.

*SECTION 6: Septage and Domestic Sludge Processing/Treatment* - It is mandatory that septage and domestic sludge shall be processed and treated prior to disposal.

In processing and treating domestic sludge and septage, the operator shall apply the best applicable and cost-effective techniques as approved by the Department of Health but not limited to the following:

- Ø Thickening
- Ø Stabilization
- Ø Conditioning
- Ø Disinfection
- Ø Dewatering
- Ø Heat Drying

*SECTION 7: Disposal of Treated/Processed Domestic Sludge* - The treated/processed domestic sludge shall be disposed through the following technology options:

#### 7.1 Landfilling

This process involves co-disposal of domestic sludge with solid waste in a sanitary landfill.

#### 7.2 Land Application.

This is the process of spreading sludge on or just below the soil subsurface. The sludge may be applied to agricultural land, forestland, etc. as organic fertilizer and/or soil conditioner to facilitate nutrient transport and increase water retention.

The Nitrogen, Phosphorus and Potassium values and pathogens including