

## **024 SUPPLEMENTAL IRR OF SEWAGE DISPOSAL AND DRAINAGE PROVISIONS (SANITATION CODE)**

**“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, 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 & 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:

- Thickening

- Stabilization
- Conditioning
- Disinfection
- Dewatering
- 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 essential trace elements and heavy metals concentration of the sludge shall be within the allowable/acceptable limits set by Bureau of Soil and Water Management, Department of Agriculture, prior to land application.

### **7.3 Other new technology options accepted by the Department of Health.**

## **SECTION 8: EVALUATION CRITERIA FOR SANITARY LANDFILL AS DISPOSAL SITE FOR DOMESTIC SLUDGE**

### **8.1 Environmental**

- 8.1.1 The base of landfill should be above high groundwater table and there should be no contact with groundwater. Sole-source aquifer and areas of groundwater recharge must be avoided.
- 8.1.2 It should be located in such a way that will minimize fugitive emissions and odor impacts.
- 8.1.3 Wetlands and habitat areas, which are important to propagation of rare and endangered species, should be avoided.
- 8.1.4 Avoid populated areas of conflicting land use such as parks and scenic areas in site selection.
- 8.1.5 Avoid areas of unique archaeological, historical and paleontological interests to preserve cultural resources.

8.1.6 Social acceptability of the project should also be given consideration.

## 8.2 Engineering

8.2.1 The physical site should be large enough to accommodate waste for the operational life of the facility.

8.2.2 Location of the area should be as close as possible to the production facility to reduce handling and transport cost. But it must be located in such a way that will not contaminate the water source.

8.2.3 The access road should be all weather, have adequate width and load capacity, with minimum traffic congestion.

8.2.4 Earth moving should be minimized; instead natural earth movements should be taken advantage of. Natural depression and valleys where water contamination is likely to occur must be avoided.

8.2.5 Avoid areas with earthquakes, slides, and faults, underlying mines, sinkholes and solution cavities.

8.2.6 The landfill should have natural clay liner or clay available for liner, and final cover material be made available.

## **SECTION 9: MANIFEST SYSTEM**

9.1 The transportation of sludge and septage shall be accompanied by a manifest. This manifest shall be accomplished by the operator and to be submitted to the following:

9.1.1 Local Chief Executives or his duly authorized representative

9.1.2 Excavator/Transporter

9.1.3 Disposal / Treatment Facility Operator

9.2 A manifest shall contain the following information such as point of origin, date & time of collection, type of sludge, volume, destination as indicated in Annex 3 (Sludge and Septage Manifest Form).

## **SECTION 10: SANITATION REQUIREMENTS AT TREATMENT / DISPOSAL SITE**

10.1 The owner/operator shall be responsible for the proper operation and maintenance of the following basic sanitation requirements:

- 10.1.1 Water supply facilities shall be in accordance with the Implementing Rules and Regulation (IRR) and Supplemental IRR of Chapter II “Water Supply” of Code on Sanitation of the Philippines (PD 856) as to its quantity and quality.
- 10.1.2 There shall be a minimum sanitation facilities requirements:
  - 10.1.2.1 Hand washing facility (1)
  - 10.1.2.2 Water closet (1)
  - 10.1.2.3 Bathroom (1)
  - 10.1.2.4 Drinking fountain (1)
  - 10.1.2.5 Utility sink (1)
  - 10.1.2.6 Ventilation and lighting
  - 10.1.2.7 Flooring & walls shall be made of impervious materials
  - 10.1.2.8 All appurtenant plumbing fixtures shall be in accordance with standard of National Plumbing Code (R.A. 1378)
  - 10.1.2.9 Provisions for soap, mirror and any approved hand-drying material.
  - 10.1.2.10 There shall be adequate and separate change rooms for both male and female users with individual lockers for clothes and personal belongings. The change room shall have a space requirement of at least 1.9 m<sup>2</sup>/user.
- 10.2 There shall be good practice for Solid Waste Management and shall conform with the provisions of Republic Act 9003 known as Ecological Solid Waste Management Act of 2001 and its implementing rules and regulations.
- 10.3 The operator shall adopt an approved vermin abatement program to control the infestation of insects and rodents. It shall be in accordance with the IRR of Chapter XVI “Vermin Control” of the Code on Sanitation of the Philippines (P.D. 856).
- 10.4 The operator / owner shall provide and institute measures to control odor and other nuisances that may be objectionable and offensive to personnel and community in accordance with the IRR of Chapter XIX “Nuisances and Offensive Trades and Occupations” of Code on Sanitation of the Philippines (P.D. 856).

## **SECTION 11: OCCUPATIONAL HEALTH AND SAFETY PLANS/ PROGRAMS**

- 11.1 The operators shall have an Occupational Health and Safety Plan/Program for his personnel, in consonance with the provision of law on the health security of workers.

- 11.2 The operators shall have a manual or a plan/program as guide of their employees in the operation and maintenance of treatment and disposal facilities for septage/domestic sludge.
- 11.3 The plant operators shall observe and require their personnel to wear the appropriate personal protective equipment (PPE) at work and at all times during the operation.
- 11.4 The personnel involved in the operation shall undergo the appropriate training regarding domestic sludge and septage handling, treatment, collection and disposal, emergency and disaster response. These trainings may be sought out from CHD or DOH accredited training institutions.
- 11.5 The operator and personnel shall secure health certificate from the City/Municipal Health Office (CHO/MHO).

**SECTION 12: POLLUTION CONTROL OFFICER (PCO)**

The operator shall have a full time in-house PCO duly accredited by Department of Environment and Natural Resources (DENR) – Environmental Management Bureau (EMB) (DENR A.O. #26 s.1990) and/or Laguna Lake Development Authority (LLDA) who shall be responsible in the supervision of sludge treatment and disposal facility and shall submit quarterly report on the operations of the facility to the EMB Regional Office/ LLDA, copy furnish to the host LGU.

**SECTION 13: ROLES AND RESPONSIBILITIES**

- 13.1 Local Government Unit (City/Municipal)
  - 13.1.1 Formulates and legislates ordinances related to sludge and septage collection, handling, transport, treatment and disposal.
  - 13.1.2 Receives and reviews notarized ESC application, conducts site inspection and recommends action.
  - 13.1.3 Implements the provisions of this Supplemental IRR through quarterly inspection or as the need arises.
  - 13.1.4 Issues Health Certificate and Sanitary Permit and other permits.
  - 13.1.5 Provides necessary supplies, equipment and other logistics support to City/Municipal Health Office for use in the conduct of evaluation, inspection, monitoring of establishments covered by this supplemental IRR.
  - 13.1.6 Implements the posting of Sanitation Standard Rating Sticker for the guidance of the general public.
  - 13.1.7 Revokes the Sanitary Permit of the operator upon the recommendation of the City/Municipal Health Office after finding discrepancies in the operation of the establishments, after due process of law.



13.1.8 Creates task force for implementation of this supplemental IRR.

13.2 Center for Health Development (CHD)

13.2.1 Validates Environmental Sanitation Clearance (ESC) application

13.2.2 Issues ESC

13.2.3 Suspends ESC as provided for in Sec. 3.5 and revokes after due process.

13.2.4 Provides technical assistance and facilitates training to operators, personnel and LGU.

13.2.5 Conducts monitoring activity based on Occupational and Health Safety Plan as well as its project operation.

**SECTION 14: PENAL PROVISION**

14.1. Any person who shall violate, disobey, refuse, omit, or neglect to comply with any of the provisions of these implementing rules and regulations, shall be guilty of violation of these rules and upon conviction shall be punished by imprisonment for the period of not exceeding six (6) months or by a fine not exceeding ₱1,000.00 or both depending upon the discretion of the court.

14.2. Any person who shall interfere or hinder, or oppose any officer, agent or member of the Department of Health or of the bureaus and offices under it, in the performance of his duty as provided for under these rules and regulations, or shall tear down, mutilate, deface or alter any placard, or notice affixed to the premises in the enforcement of these rules and regulations shall be guilty of misdemeanor and punishable upon conviction by imprisonment for a period of not exceeding six (6) months or by a fine not exceeding ₱1,000.00 or both depending upon the discretion of the court.

14.3. In addition to this, local ordinances shall also be taken into consideration.

**SECTION 15: SEPARABILITY CLAUSE**

In the event that any rule, section, paragraph, sentence, clause or words of these supplemental rules and regulations is declared invalid for any reason, the other provisions thereof shall not be affected thereby.

**SECTION 16: REPEALING CLAUSE**

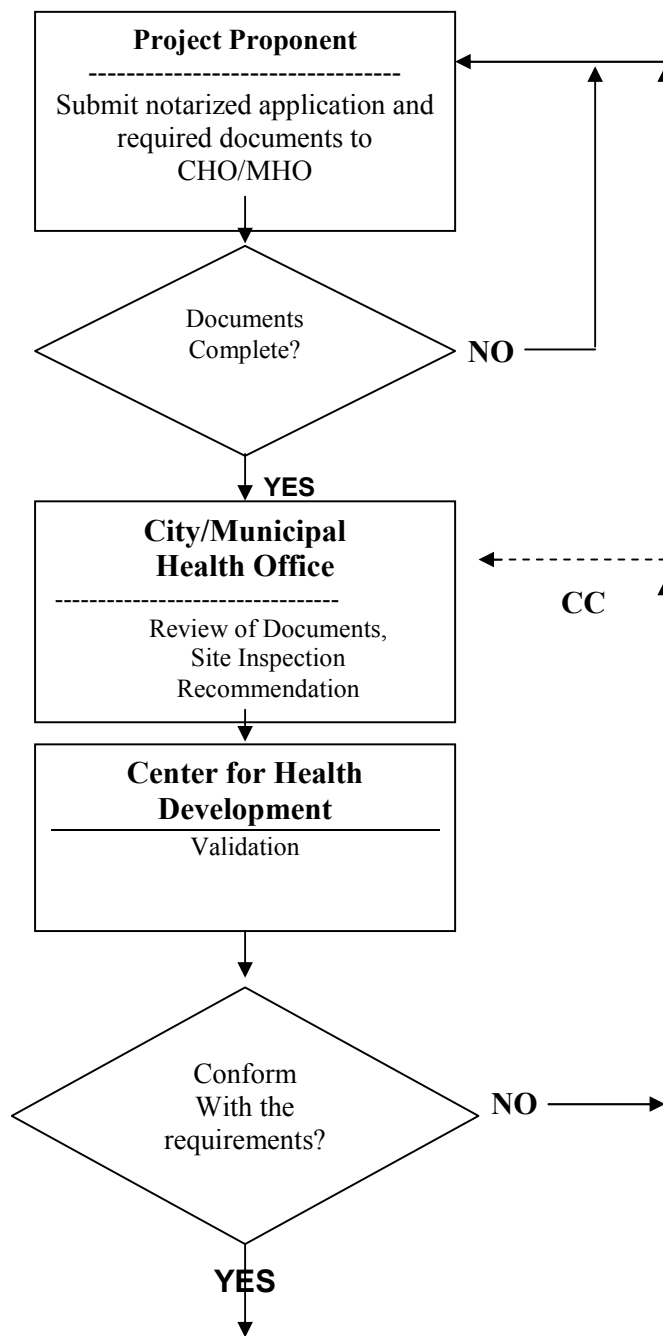
All pertinent rules and regulations, which are inconsistent with the provisions of these implementing rules and regulations, are hereby repealed or amended accordingly.

**SECTION 17: EFFECTIVITY**

These rules and regulations shall take effect after fifteen (15) days from date of publication in the official gazette or a newspaper of general circulation.

Approved on this \_\_\_\_\_ day of \_\_\_\_\_ two thousand three.

**MANUEL M. DAYRIT, MD, MSc**  
Secretary of Health



**Issuance of Environmental Sanitation Clearance**

**Figure 1. FLOWCHART FOR SECURING ENVIRONMENTAL SANITATION CLEARANCE**

ANNEX 1: ESC

CONTROL NO. \_\_\_\_\_

**Republic of the Philippines**  
**Department of Health**  
CENTER FOR HEALTH DEVELOPMENT for \_\_\_  
Telephone Nos. \_\_\_\_\_

**ENVIRONMENTAL SANITATION CLEARANCE**

Issued to : \_\_\_\_\_  
(Name of Owner / Operator)

Address : \_\_\_\_\_  
(No., Street, City / Municipality, Province)

Nature of business activities : (Check appropriate space) \_\_\_\_\_

- a.) Collection & Transport \_\_\_\_\_
- b.) Treatment \_\_\_\_\_
- c.) Disposal \_\_\_\_\_

Operational Service Area : \_\_\_\_\_

Recommending Approval : \_\_\_\_\_  
**Supervising Sanitary Engineer**

Approved: \_\_\_\_\_  
**Director IV**

ESC No. : \_\_\_\_\_  
Date issued: \_\_\_\_\_  
Official Receipt No. \_\_\_\_\_  
Date Issued : \_\_\_\_\_



**ANNEX 2: ENVIRONMENTAL SANITATION CLEARANCE APPLICATION FORM**

Application Form No. \_\_\_\_\_

Date:

**The Mayor**

\_\_\_\_\_

Attention: City/Municipal Health Officer

\_\_\_\_\_

**Dear Sir/Madam:**

I have the honor to apply for issuance of Environmental Sanitation Clearance with pertinent information to support my application.

Approved Business Name: \_\_\_\_\_

Owner/Manager: \_\_\_\_\_

Address: \_\_\_\_\_

Description of Business:

\_\_\_\_\_  
\_\_\_\_\_

I hereby certify that the statements made in this application and the attachments hereof are given/submitted under pain of PERJURY/FALSIFICATION OF OFFICIAL DOCUMENTS against the affiant if warranted.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_ in \_\_\_\_\_.

\_\_\_\_\_  
Affiant/Applicant

**SUBSCRIBED AND SWORN** to before me, in \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, Affiant exhibiting to me her Community Tax Certificate No. \_\_\_\_\_ issued at \_\_\_\_\_ on \_\_\_\_\_.

**WITNESS MY HAND AND SEAL** the same date and place above stated.

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Notary Public

*Attachment: Project Description*

## **ANNEX 2-A**

### **OUTLINE OF PROJECT DESCRIPTION FOR STATIONARY SERVICE AREA**

1. Basic Project Information
2. Site Information
3. Project Rationale / Objective
4. Project Type & Area Covered
5. Operational Processes
6. Plans and Specifications
7. Project Component
8. Description of Existing Environment
  - a. Topography
  - b. Hydrology
  - c. Geological condition
9. Environmental Sanitation Measures
10. Brief Discussion on Environmental and Health Impacts
11. Brief Discussion on Mitigating/Control Measures
12. Occupational and Health Safety Measures
13. Monitoring and Evaluation Plan

## **Annex 2-B**

### **OUTLINE OF PROJECT DESCRIPTION FOR MOBILE SERVICE AREA**

1. Proponent information and contact details
2. Scope of activities
3. Area covered
4. Method of collection
5. Type of vehicles and equipment
6. Occupational and Health Safety measures
7. Manpower capability
8. Mitigating/Control Measures
9. Maintenance Schedule
10. Operational Cost
11. Disposal Site and Environmental Compliance Certificate (ECC) No.



**SLUDGE AND SEPTAGE MANIFEST FORM**

***SLUDGE/SEPTAGE ORIGIN***

NAME (HH/Unit Owner): \_\_\_\_\_  
ADDRESS : \_\_\_\_\_  
\_\_\_\_\_

Date &  
Time of Collection : \_\_\_\_\_

| <b><i>SOURCE/TYPE OF SLUDGE</i></b> | <b>VOLUME (m<sup>3</sup>)</b> |
|-------------------------------------|-------------------------------|
| Residential _____                   | _____                         |
| Commercial _____                    | _____                         |
| Industrial/Institutional _____      | _____                         |

***EXCAVATOR/TRANSPORTER***

Operator/Company \_\_\_\_\_  
Address \_\_\_\_\_  
Type of Vehicle \_\_\_\_\_  
Plate No./ Body No. \_\_\_\_\_  
Name of Driver \_\_\_\_\_  
Signature \_\_\_\_\_  
Driver's License # \_\_\_\_\_  
Other Personnel \_\_\_\_\_

***EMERGENCY INFORMATION***

Emergency Measures:  
Spills : \_\_\_\_\_  
Accidents: \_\_\_\_\_  
Breakdown hauling Equipment: \_\_\_\_\_  
Person to Contact in Case of Emergency:  
Name & Address: \_\_\_\_\_  
\_\_\_\_\_

Contact Number: \_\_\_\_\_  
\_\_\_\_\_

Signed by :

\_\_\_\_\_  
Name and Signature of Barangay Captain or  
Authorized Representative

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***DISPOSAL FACILITY***

**DESTINATION**

Name & Address of Disposal Facility: \_\_\_\_\_  
Date and Time Received \_\_\_\_\_

***TYPE OF DISPOSAL/TREATMENT:***

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Signed by :

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Name & Signature of Disposal Facility Owner Or Authorized Representative