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DENR ADMINISTRATIVE ORDER NO. 09
Series of 2006

SUBJECT: General Guidelines in the Closure and Rehabilitation of Open Dumpsites and Controlled Dump Facilities

Pursuant to Section 37 of RA 9003 otherwise known as the Ecological Solid Waste Management Act of 2000 and DENR Administrative Order No. 2001-34, the Implementing Rules and Regulations of RA 9003, the following guidelines on the closure and rehabilitation of open dumpsites and controlled dump facilities are hereby promulgated:

SECTION 1. RATIONALE

RA 9003, specifically Section 37, states that *"No open dumps shall be established and operated, nor any practice or disposal of solid waste by any person, including LGUs, which constitutes the use of open dumps for solid waste be allowed after the effectivity of the Act: Provided, that within three (3) years after the effectivity of this Act, every LGU shall convert its open dumps into controlled dumps, in accordance with the guidelines set in Section 41 of this Act. Provided, further, that no controlled dumps shall be allowed five (5) years following effectivity of this Act."* Therefore, all open dumps and controlled dump facilities should have been closed and phased out as of February 16, 2006.

These guidelines adequately address and mitigate the possible effects/impacts of open dumpsites and controlled dump facilities, thus ensuring that their closure will be done in a proper manner, with environmental protection measures and safeguards in place.

Furthermore, these guidelines support the National Solid Waste Management Commission Resolution No. 5, the Guidelines on the Closure and Rehabilitation of Open and Controlled Disposal Facilities which was approved on December 15, 2005.

SECTION 2. OBJECTIVES

2.1 To establish prescribed workable parameters and mechanisms for the proper closure of existing open dumpsites and controlled

dump facilities in compliance with Section 37 of Republic Act 9003.

2.2 To establish closure requirements and a schedule of rehabilitation activities based on the conditions of the present site, operational level, existing facilities, and the surrounding environment.

SECTION 3. SCOPE

These guidelines shall cover the procedures and requirements for the LGUs to facilitate the full closure program of open dumpsites (ODs) and controlled dump facilities (CDFs), determine the post-closure land utilization and effect adequate rehabilitation of the site. It likewise provides the DENR approval process for the closure and rehabilitation program.

The guidelines shall likewise apply to CDFs operated by private entities. In the event where the LGU commissioned a private entity to undertake the development and operation of the CDF, the LGU shall be responsible for the submission of the necessary closure and rehab plan to the DENR.

SECTION 4. ROLE OF THE LGUS AND/OR PRIVATE OPERATORS

The LGUs and/or private operators shall prepare and implement a Closure and Rehab Plan for the existing open dumpsites and/or controlled dump facilities. The said program shall be viewed as an integral part of the overall implementation of the LGU Solid Waste Management Plan.

4.1 The LGU shall undertake the preliminary closure assessment and a complete rundown of all possible data that need to be covered to come up with a comprehensive and relevant assessment.

4.2 The LGU must submit the closure plan to the EMB Regional Office for review and approval and implement the same as soon as the Authority to Close (ATC) is issued.

SECTION 5. ROLE OF THE DENR

The DENR and EMB Regional Offices shall guide the LGUs in the formulation of the closure plan and other related activities.

5.1 The PENR/CENR Offices shall provide technical assistance to the LGUs in the preparation of the closure and rehabilitation

plans. After initial review, the same shall be endorsed to the EMB Regional Office;

5.2 The EMB Regional Office shall review and evaluate the closure plan submitted by the LGU within fifteen (15) days from submission. After which, the EMB shall respond appropriately (i.e., that is issue the Authority to Close, [ATC] if closure plan is found sufficient, or inform the LGU of other requirements, if any).

The ATC shall stipulate the approval of the Closure and Rehab Plan along with the conditions identified to carry out the activities in the closure program, the post-closure land utilization and monitoring thereof.

5.3 The EMB Regional Office, with the assistance from the PENRO/CENRO shall likewise continue to monitor and update the existing database on open dumpsites and as appropriate, endorse for the elevation of cases to the Environmental Ombudsman against non-complying LGUs.

5.4 The CENRO shall conduct regular inspection and monitoring of the dumpsite during the actual closure activities and thereafter to ensure that the site is not utilized as an open dump. Cases where the closed site is reused as an open dump/controlled dump must be reported to the concerned DENR Regional Executive Director and EMB Regional Director for the imposition of appropriate sanctions in accordance with RA 9003 and other applicable rules and regulations.

SECTION 6. PROCEDURES FOR CLOSURE AND REHABILITATION

The following guidelines shall provide the LGUs with the appropriate closure procedure and the extent of subsequent work needed to undertake the full closure program on Municipal Solid Waste (MSW) disposal sites.

6.1 Pre-Closure Assessment

The activities covered by the pre-closure assessment shall include the following:

6.1.1 Review of available records, files and information regarding the dump

6.1.2 Evaluation of potential or existing impacts on the ecological and human environment

6.1.3 Determination of potential contaminants (if any) which could get into the local environment and the formulation of appropriate mitigating and remedial measures.

6.2 Assessment Parameters

6.2.1 Review of the geology of the site, depth of groundwater, total volume/capacity and types of wastes disposed, reports, studies, historical records concerning the dumpsite (operations, unusual events such as fires, dumping of hazardous wastes, etc.)

6.2.2 Review of relevant available maps (map of the dumpsite and its surroundings, topographic, geologic, hydrogeologic, land use)

6.2.3 Identification of existing land uses around the area.

6.2.4 Interview of those directly involved with the operation of the dumpsite, waste pickers, and residents near site

6.2.5 Inventory of existing settlements, structures, surface water bodies, springs and water wells. If practical, water samples may be taken to determine extent of contamination.

6.2.6 Determination of points of leachate seepage and ponding within and beyond the disposal facility.

6.2.7 Where appropriate and for larger dumpsites, conduct topographic survey of the dumpsite, extending some distance from its boundaries.

6.2.8 Conduct geo-technical investigation of large open dumps to determine stability of slopes.

6.2.9 Identification of sources of soil or other cover material for the site.

6.2.10 Determination, if practical, of the depths of the dumped wastes

6.2.11 Determination of gas leakage within and on the areas surrounding the dumpsite

6.2.12 Conduct leachate and gas sampling (if practical)

6.3 Components of the Closure and Rehabilitation Plan

After conducting the site assessment, the LGU shall prepare the Closure and Rehabilitation Plan which shall include the following basic components:

A. Site Clearing. Storage areas for recyclables, makeshift huts and other structures within the boundaries of the disposal facility should be removed.

The LGUs on the other hand may coordinate with the National Housing Authority, other government agencies, NGOs and POs to determine the assistance needed in the possible relocation and alternative livelihood for the families affected by the disposal site closure program.

B. Site Grading and Stabilization of Critical Slopes. The most critical aspect of the closure plan is the stabilization of the usually unstable slope within the site. The closure plan shall make provisions for the identification of areas within the dumpsites with potential instability. The slope profile [illegible] graded to slopes ranging from 2 to 4% to prevent ponding and promote natural drainage. Side slopes can be generally set at the ratio of 1 vertical to 3 horizontal or gentler depending in the nature of waste and actual site conditions.

C. Application and Maintenance of Soil Cover. The graded site should be covered with soil, inert or stable material or clay material to prevent entry of water into the waste pile and access by vectors. The final cover should be at least 60 centimeters which include a 15 - cm topsoil and a 45-cm compacted soil. The topsoil, which is usually not compacted, shall serve as protection layer for the compacted soil cover and as a barrier to reduce entry of water into the waste pile, minimize gas migration if any, prevent animals from getting into the underlying waste, minimize the emission of odors and support vegetation growth.

D. Provision of Drainage Control System. Peripheral canals or ditches should be constructed around the site to divert runoff. The intention is to prevent contact of the waste pile with water thereby reducing the potential for leachate

E. Leachate Management. The pre-closure assessment should determine the points of exit of the leachate from the waste pile from which a canal or ditch can be built to facilitate collection. The contaminated liquid must not be allowed to drain into streams or natural bodies of water. The collected leachate may then be allowed to evaporate or sprayed back into the waste pile. Otherwise, the leachate must be treated through other appropriate process.

Natural attenuation may be resorted for small volume of leachate generated from old dumpsites of small capacity/or intermittently used.

F. Gas Management. Vents made up of appropriate materials such as bamboo or PVC pipes shall be installed at selected points within the waste pile. As a general rule, vents may be spaced 50 meters apart.

A more extensive leachate and gas management program may be developed and implemented depending on the results of the assessment or on gas utilization program of the LGU.

G. Fencing and Security. A fence shall be constructed around the dumpsite to prevent unauthorized entry of waste pickers, children and illegal settlers and stray animals. The extent of fencing shall be dictated by field conditions. Natural materials such as shrubs or fast growing trees may be used particularly in rural areas. Regular visits by an LGU designated security shall be undertaken to deter illegal dumping.

H. Putting up of Signage. An appropriate sign indicating containing the following messages should be put up at a conspicuous place near or at the entry section of the dumpsite:

- Name of Dumpsite
- Status of Operation
- Prohibition of burning, squatting, children and animal access

I. Prohibition of burning at the dumpsite. Burning of waste must be prohibited at the dumpsite.

SECTION 7. SEPARABILITY CLAUSE

If any section of these guidelines is held or declared unconstitutional or invalid by a competent court, the other sections or provisions hereof shall continue to be in force as if the sections or provisions so annulled or voided have never been incorporated herein.

SECTION 8. REPEALING CLAUSE

All pertinent guidelines, rules and regulations or portions thereof inconsistent with these Guidelines are hereby revised, amended and/or modified accordingly.

SECTION 9. AMENDMENTS

These guidelines may be amended and/or modified in whole or parts hereof from time to time by the DENR.

SECTION 10. EFFECTIVITY

These guidelines shall take effect fifteen (15) days after publication in two (2) newspapers of general circulation and filing with the office of the National Administrative Register.

ANGELO T. REYES
Secretary, DENR and
Chairman, NSWMC

Republic of the Philippines
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AND NATURAL RESOURCES
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