

DENR ADMINISTRATIVE ORDER NO. 2000-28

March 14, 2000

Subject : **“Implementing Guidelines on Engineering Geological and Geohazard Assessment as Additional Requirement for ECC Applications covering Subdivision, Housing and other Land Development and Infrastructure Projects”**

Pursuant to the objectives of the Government to ensure the suitability and safety of a project site proposed for development, the following implementing guidelines on engineering geological and geohazard assessment are hereby promulgated:

Section 1. Rationale

The Philippines, by reason of its geographic, geologic and tectonic setting, is prone to several geologic and natural hazards. The recognition of such hazards however, is often overlooked by land developers/planners, project proponents and the general public except when a dramatic and devastating incident occurs, such as a strong earthquake, massive landslide or heavy flooding event that causes great loss of life and destruction to property.

To therefore adequately and comprehensively address and mitigate the possible effects/impacts of geologic hazards, it is hereby required that, in addition to the requirement for the issuance of an Environment Compliance Certificate (ECC) as provided for under *Presidential Decree No. 1586, Presidential Proclamation No. 2146 and its implementing rules and regulations*, all proponents of subdivision development projects, housing projects and other land development and infrastructure projects, private or public, shall undertake an Engineering Geological and Geohazard Assessment.

Section. 2. Definition of Terms

The following terms as used in these guidelines shall mean:

- a) **“Engineering Geology”** – refers to the branch of Geology that applies geologic fundamentals and principles in the

investigation and evaluation of naturally occurring rock and soil for the use in the design of civil works.

- b) **“Environmental Compliance Certificate (ECC)”** – refers to the document issued by the Secretary or the Regional Executive Director certifying that based on the representations of the proponent and as reviewed and validated by the Environmental Impact Assessment Review Committee (EIARC), the proposed project or undertaking will not cause a significant environmental impact; that the proponent has complied with all the requirements of the Environmental Impact System; and that the proponent is committed to implement its approved Environmental Management Plan in the Environmental Impact Statement or mitigation measures in the Initial Environmental Examination.
- c) **“Geologic Hazards or Geohazards”** – refer to natural and man-induced geological-processes that have potential to cause destruction and pose a threat or risk to man’s life and property.
- d) **“Geological Engineering”** – refers to the application of the principles of soils and rock mechanics in the investigation, evaluation and design of civil works involving the use earth materials and the inspection and/or testing of the construction thereof; but herein limited to the assessment of physical and index properties of soils.
- e) **“Structural Geology”** – refers to the branch of Geology that studies the architecture of the earth’s crust and addresses its structure, form, symmetry geometry and deformation processes, including the assessment of the strength and mechanical properties of crustal materials.

Section 3. Types of Geological Assessment

All Developers/Projects Proponents, public or private, of subdivision, housing and other land development and infrastructure projects falling within the scope of the ECC requirements shall undertake Engineering Geological and Geohazard Assessment as follows:

3.1 Geological Site Scoping

This shall be undertaken by a Licensed Government Geologist of the Department of Environment and Natural Resources – Mines and Geosciences Bureau (DENR-MGB). The geological site scoping shall consist of a preliminary site geological inspection of the proposed project area or land development area. A Geological Site Scoping Report (GSSR) on the above inspection shall be provided by the DENR-MGB to the Developer/Project Proponent. This report shall include recommendations on the scope of work to be undertaken by the Developer/Proponent in terms of detailed engineering geological, structural geological and geohazard assessment and geotechnical engineering tests, including specialized studies, if necessary, for submission to the DENR-MGB and transmittal to the Environmental Management Bureau (DENR-EMB) in the form of an Engineering Geological and Geohazard Assessment Report (EGGAR).

3.2 Engineering Geological and Geohazard Assessment

This shall be undertaken by a license professional Geologist with a minimum experience of five (5) years, or by a licensed Engineer with the same number of years of experience and with training or post-graduate diploma in Engineering Geology/Structural Geology.

For this type of assessment, a duly signed and sealed **EGGAR** shall be submitted by the licensed Geologist/Engineer who conducted the required scope of work to DENR-MGB. The **EGGAR** shall include the results of all engineering geological, structural geological and geohazard assessment and geotechnical tests, with any other specialized studies undertaken, as prescribed in the corresponding **GSSR** previously prepared by DENR-MGB. The EGGAR shall be subject to review/verification by DENR-MGB and for appropriate transmittal or endorsement to the DENR-EMB and other concerned government Agencies.

The DENR-MGB, upon the request of a Government Agency/Entity, may also conduct an engineering geological and geohazard assessment and geotechnical engineering tests, including any specialized studies, if necessary in connection with a Government development project: **Provided**, That said assessment work and specialized studies are subject of a **Memorandum of Agreement (MOA)** between the DENR-MGB and the concerned Government Agency/Entity. As to be provided for in the **MOA**, an **EGGAR** shall be prepared by DENR-MGB.

The technical checklist and guide on the preparation of an EGGAR shall be formulated by DENR-MGB.

3.3 Geological Review and Verification

In cases wherein an **EGGAR**, or an equivalent technical report, has already been prepared prior to the effectivity of this **Order** or prior to the conduct of scoping, and that no geological site scoping report has been prepared by the DENR-MGB, the Developer or Project Proponent may still submit said **EGGAR/technical report** to DENR-MGB for appropriate technical review and verification. For this purpose, a corresponding **Geological Verification Report (GVR)** shall be prepared by DENR-MGB and submitted to the DENR-EMB and other concerned government agencies.

Section 4. Fees and Charges

The following fees and charges shall be payable to the DENR-MGB for services rendered:

4.1 Geological Site Scoping – Geological Review and Verification Fees

For the conduct of a Geological Site Scoping or a **Geological Review and Verification**, the concerned Developer or Project Proponent shall pay the standard fees as prescribed under the **PAID INVESTIGATION** scheme adopted from Item C, Annex 4-A (Administrative Fees and Other Charges, as revised) of the Philippine Mining Act of 1995 and its Implementing Rules and Regulations.

4.2 Engineering Geological and Geohazard Assessment Fees/Funds

For the conduct of an **Engineering Geological and Geohazard Assessment** and the preparation of a corresponding **EGGAR** by the DENR-MGB in relation to Government development projects, the concerned Government Agency/Entity of a Government development project shall enter into a **MOA** with DENR-MGB and shall provide the funds necessary for the conduct of the assessment and any other required specialized studies.

Section 5. Creation of Urban Geology Units

To implement these guidelines effectively throughout the country, each Regional Office of DENR-MGB shall organize an Urban Geology Unit from its existing personnel complement. The members of the Urban Geology Unit shall be responsible for geological site scoping, review and verification/validation of the EGGAR and shall provide technical expertise to the EIA Review Committee of the concerned DENR-EMB Regional Office. The Urban Geology Units may also obtain technical advice from other experts with respect to geotechnical engineering aspects and other specialized studies as necessary.

The DENR-MGB Central Office shall provide the technical checklists, guidelines and standards for the engineering geological and geohazard assessment, review and verification.

Section 6. Repealing and Amending Clause

All orders, rules and regulations inconsistent with or contrary to the provisions of these implementing rules and regulations are hereby repealed or modified accordingly.

Section 7. Effectivity

This order shall take effect fifteen (15) days after its complete publication in a newspaper of general circulation and fifteen (15) days after registration with the Office of the National Administrative Register.

(Sgd.) **ANTONIO H. CERILLES**

Secretary