

Republic of the Philippines
PROVINCE OF LA UNION

TANGGAPAN NG SANGGUNIANG PANLALAWIGAN

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OF LA UNION HELD AT THE CITY OF SAN FERNANDO ON SEPTEMBER 18, 2003

Hon. Augusto Aureo Q. Nisce Vice-Governor/Presiding Officer

PRESENT:

Hon. Jonathan Justo A. Orros Sangguniang Panlalawigan Member
Hon. Gerardo A. Vioria Sangguniang Panlalawigan Member
Hon. Reynaldo M. Mosuela Sangguniang Panlalawigan Member
Hon. Hermenegildo A. Gualberto Sangguniang Panlalawigan Member
Hon. Henry A. Bacurnay, Jr. Sangguniang Panlalawigan Member
Hon. Franco F. Rimando Sangguniang Panlalawigan Member
Hon. Reynaldo V. Dulay Sangguniang Panlalawigan Member
Hon. Ma. Annabelle S. de Guzman Sangguniang Panlalawigan Member
Hon. Pedro F. Ofiana, Jr. Sangguniang Panlalawigan Member
Hon. Mario Eduardo C. Ortega Sangguniang Panlalawigan Member
Hon. Francisco Emmanuel R. Ortega III Sangguniang Panlalawigan Member

ABSENT:

Hon. Pablo C. Ortega Sangguniang Panlalawigan Member (OTA)
Hon. Gerard Jose G. Ostrea Sangguniang Panlalawigan Member (OTA)

PROVINCIAL ORDINANCE NO. 007-2003

Sponsored by: Sangguniang Panlalawigan Member Ma. Annabelle S. de Guzman
Sangguniang Panlalawigan Member Reynaldo M. Mosuela
Sangguniang Panlalawigan Member Pedro F. Ofiana, Jr.
Sangguniang Panlalawigan Member Gerardo A. Vioria
Sangguniang Panlalawigan Member Reynaldo V. Dulay
Sangguniang Panlalawigan Member Franco F. Rimando
Sangguniang Panlalawigan Member Henry A. Bacurnay, Jr.

Be it enacted by the Sangguniang Panlalawigan of La Union that:

**CHAPTER I
GENERAL PROVISIONS**

Article A. Short Title and Scope

Section 1A.01. Title. This Ordinance shall be known as the “**Provincial Environmental Protection and Management Code of La Union (2002)**”

Section 1A.02. Scope. This Code covers all general ordinances and special ordinances related to environmental management including protection and conservation of natural resources within the province of La Union.

Article B. Policy and Goal

Section 1B.01. Declaration of Policy. It is hereby declared as a continuing policy of this province the following:

- (a) to create, develop, maintain and improve conditions under which man and nature can thrive in productive and enjoyable harmony with each other;
- (b) to fulfill the social, economic and other requirements of present and future generations of Filipinos; and
- (c) to insure the attainment of an environmental quality that is conducive to a life of dignity and well-being.

Section 1B.02. Goal. In pursuing this policy, it shall be the responsibility of the provincial government, in cooperation with concerned private organizations and entities, to use all practicable means, consistent with other essential considerations of national policy, in promoting the general welfare to the end that the general public may undertake the following:

- (a) recognize, discharge and fulfill the responsibilities of each generation as trustee and guardian of the environment for succeeding generations;
- (b) assure the people of a safe, decent, healthful, productive and aesthetic environment;
- (c) encourage the widest exploitation of the environment without degrading it, or endangering human life, health and safety or creating conditions adverse to agriculture, commerce and industry;
- (d) reserve important historic and cultural aspects of the Philippine heritage;
- (e) attain a rational and orderly balance between population and resource use; and
- (f) improve the utilization of renewable and non-renewable resources.

Section 1B.03. Right to a Healthy Environment. In furtherance of these goals and policies, the provincial government recognizes the right of the people to a healthy environment. It shall be the duty and responsibility of each individual to contribute to the preservation and enhancement of the environment.

Article C. Rules of Construction

Section 1C.01. Words and Phrases. Words and phrases embodied in this Code but not herein specifically defined shall have the same meaning as found in legal dictionaries as well as in existing laws.

Section 1C.02. Construction of Codal Provisions. In construing the provisions of this Code, the following rules of construction shall be observed unless otherwise inconsistent with the manifest intent of the provisions or when applied they would lead to absurd or highly improbable results.

- (a) **General Rule.** All words and phrases shall be construed and understood according to the common and approved usage of the language; but technical words and phrases and such other words in this Code which may have acquired a peculiar or appropriate meaning shall be construed and understood according to such technical, peculiar or appropriate meaning.
- (b) **Gender and Number.** Every word in this Code importing the masculine gender shall extend to both male and female. Every word importing the singular number shall extend and apply to several persons or things as well; and every word importing the plural number shall extend, and applied, also to one person or thing.

- (c) **Computation of Time.** The time within which an act is to be done as provided in this Code, or in any rule or regulation issued pursuant to the provisions thereof, when expressed in days shall be computed by excluding the first day and including the last day, except when the last day falls on Sunday or holiday, in which case, the same shall be excluded from the computations and the next business day shall be considered the last day.
- (d) **Tenses.** The use of any verb in the present tense shall include the future whenever applicable. The words “shall have been” shall include past and future cases. The use of the word “shall” in this Code means the act being required to be done is mandatory, whereas when the word “may” is used, it means permissive.
- (e) **References.** All references to the “Chapters”, “Articles”, or “Sections” are to chapters, articles or sections in this Code unless otherwise specified.
- (f) **Conflicting Provisions of Chapters.** If the provisions of different Chapters conflict with or contravene each other, the provisions of each chapter shall prevail as to all specific matter and questions involved therein.
- (g) **Conflicting Provisions of Sections.** If the provisions of different sections in the same chapter conflict with each other, the provisions of the Section which is last in point of sequence shall prevail.

Section 1C.03. Amendment and Integration of Additional Provisions. Any amendment on this Code may be introduced to the “Chapter”, “Article” or “Section” concerned. All ordinances or provisions thereof enacted subsequent to the date of effectivity of this Code shall be compiled in such a way as to bear the corresponding chapter, article or section to which such ordinance or provision pertains. Such new provisions shall be integrated into the corresponding chapter, article or section whenever a new printing or reproduction of this Code is undertaken upon authorization of the Sangguniang Panlalawigan.

Section 1C.04. Existing Rights. No right accrued, action or proceeding commenced before the effectivity of this Code shall be adversely affected by any provisions hereof. Thereafter, all procedures or actions to be taken shall conform to the provisions of this Code whenever possible.

Section 1C.05. Reference to Code. Whenever reference is made to any portion of this Code, such reference shall apply to all amendments and additions now or may hereafter be introduced.

Section 1C.06. Effect of Heading. The “Chapter, Article and Section’ headings do not in any manner affect the scope, meaning or intent of the provisions contained in this Code.

Section 1C.06. Effect of Heading. The provisions of this Code which are substantially the same as that of previous or existing ordinances particularly when dealing with the same subject-matter shall be construed as “restatement” and not as a new enactment.

Article D. Legal Basis

Section 1D.01. Pertinent Laws. This Code is enacted pursuant to the provisions of the following:

- 1) Republic Act No. 7160 otherwise known as the Local Government Code of 1991, particularly Sections 468 (1-vi) of RA 7160 thereof which mandates the

Sangguniang Panlalawigan “to protect the environment and impose appropriate penalties for acts which endanger the environment, such as dynamite fishing and other forms of destructive fishing, illegal logging and smuggling of logs, smuggling of natural resources products and endangered species of flora and fauna, slash and burn farming, and such other activities which result in pollution, acceleration of eunthrophication of rivers and lakes, or of ecological balance.”;

- 2) PD 1152 - otherwise known as the Philippine Environment Code which prescribes specific environment management policies and environment quality standards;
- 3) PD 984 amending RA 3931 otherwise known as the “Pollution Control Law” which prescribes specific policies on pollution control and declaring as a national policy the maintenance of a reasonable standards of purity for the waters and air with their utilization for domestic, agricultural, industrial and other legitimate purposes.
- 4) PD 1067 otherwise known as the “Water Code of the Philippines” which (1) established the basic principles and framework relating to the appropriation, control and conservation of water resources to achieve the optimum development and rational utilization of these resources; (2) defined the extent of the rights and obligations of water users and owners including the protection and regulation of such rights; (3) declared that all waters belong to the State. (4) all waters that belong to the State can not be the subject to acquisitive prescription.
- 5) PD 7942 otherwise known as the “Philippine Mining Act of 1995” which (1) institutes a new system of mineral resources exploration, development, utilization, and conservation; (2) declares that all mineral resources in public and private lands within the territory and exclusive economic zone of Philippines are owned by the State;
- 6) PD 1150 amending PD 581 regulating panning or sluicing for gold inside mining claims or in public or private lands;
- 7) RA. 7076 otherwise known as the "People's Small-scale Mining Act of 1991" declaring as a policy of the State to promote, develop, protect and rationalize viable small-scale mining activities in order to generate more employment opportunities and provide an equitable sharing of the nation's wealth and natural resources, giving due regard to existing rights;
- 8) PD 1151 otherwise known as the “Philippine Environmental Policy” declaring as a continuing policy of the State (a) to create, develop, maintain and improve conditions under which man and nature can thrive in productive and enjoyable harmony with each other, (b) to fulfill the social, economic and other requirements of present and future generations of Filipinos, and (c) to insure the attainment of an environmental quality that is conducive to a life of dignity and well-being.
- 9) PD 1198 requiring all individuals, partnerships or corporations engaged in the exploration, development and exploitation of natural resources or in the construction of infrastructure projects to restore or rehabilitate areas subject thereof or affected thereby to their original condition;
- 10) RA. 6969 otherwise known as the "Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990." - prescribing measures to control toxic substances and hazardous and nuclear wastes, providing penalties for violations thereof, and for other purposes;

- 11) PD 704 otherwise known as the "Fisheries Decree of 1975" declaring as a policy of the State to accelerate and promote the integrated development of the fishery industry and to keep the fishery resources of the country in optimum productive condition through proper conservation and protection.
- 12) PD 705 otherwise known as the "Revised Forestry Code of the Philippines." revising PD 389 (Forestry Reform Code of the Philippines) which declares the following:
 - a) The multiple uses of forest lands shall be oriented to the development and progress requirements of the country, the advancement of science and technology, and the public welfare;
 - b) Land classification and survey shall be systematized and hastened;
 - c) The establishment of wood-processing plants shall be encouraged and rationalized; and
 - d) The protection, development and rehabilitation of forest lands shall be emphasized so as to ensure their continuity in productive condition.
- 13) PD 1181 (Motor Vehicle Pollution Control Law) - providing for the prevention, control and abatement of air pollution from motor vehicles in order to protect the health and welfare of the people and to prevent or minimize damage to property and hazards to land transportation.
- 14) PD 600 otherwise known as the Marine Pollution Decree of 1974 which declares a national policy to prevent and control the pollution of seas by the dumping of wastes and other matter which create hazards to human health, harm living resources and marine life, damage amenities, or interfere with the legitimate uses of the sea within the territorial jurisdiction of the Philippines.
- 15) PD 1586 establishing an environmental impact statement system, including other environmental management related measures founded and based on the environmental impact statement required, under Section 4 of Presidential Decree No. 1151, of all agencies and instrumentalities of the national government, including government-owned or controlled corporations, as well as private corporations, firms and entities, for every proposed project and undertaking which significantly affect the quality of the environment.
- 16) PD 856 otherwise known as the "Sanitation Code of the Philippines".
- 17) RA 8048 otherwise known as "Coconut Preservation Act of 1995" providing for the regulation of the cutting of coconut trees and its replenishment.
- 18) RA No. 8749, otherwise known as the "Philippine Clean Air Act of 1999,"
- 19) RA 9072 otherwise known as the "National Caves and Cave Resources Management and Protection Act".
- 20) RA 9147 otherwise known as the "Wildlife Resources Conservation and Protection Act".

- 21) RA 7586 otherwise known as the "National Integrated Protected Areas System Act of 1992" or NIPAS Law.
- 22) RA 8550 otherwise known as the "Philippine Fisheries Code of 1998" and its implementing rules and regulations (IRR).

CHAPTER II PROTECTION AND MANAGEMENT OF WATER RESOURCES

Article A. Objectives and Principles

Section 2A.01. Restatement of Objectives. The objectives laid down under PD 1067 otherwise known as the "Water Code of the Philippines of 1976" are hereby restated and adopted, viz:

- a) To establish the basic principles and framework relating to the appropriation, control and conservation of water resources to achieve the optimum development and rational utilization of these resources;
- b) To define the extent of the rights and obligations of water users and owners including the protection and regulation of such rights;
- c) To adopt a basic law governing the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources and rights to land related thereto;

Section 2A.02. Restatement of Principles. The principles laid down under PD 1067 are hereby restated and adopted, viz:

- a) All waters belong to the State.
- b) All waters that belong to the State can not be the subject to acquisitive prescription.
- c) The State may allow the use or development of waters by administrative concession.
- d) The utilization, exploitation, development, conservation and protection of water resources shall be subject to the control and regulation of the government through the National Water Resources Council.
- e) Preference in the use and development of waters shall consider current usages and be responsive to the changing needs of the country.

Section 2A.03. Definitions. As used in this Chapter, the technical terms:

Waters - refers to water under the grounds, water above the ground, water in the atmosphere and the waters of the sea within the territorial jurisdiction of this province.

Appropriation of water - refers to the acquisition of rights over the use of waters or the taking or diverting of waters from a natural source in the manner and for any purpose allowed by law.

Artesian Well - refers to a well where water is confined under hydrostatic pressure between two relatively impervious layers such as rock formations.

Bored Well - means a well constructed by manually driven augers into the ground.

Cistern - means a water-tight tank used to store water.

Coliform Organisms - refers to any rod-shaped, non-spore-forming, gram negative bacteria capable of growth in the presence of bile salts, or other surface-active agents with similar growth-inhibiting properties which are cytochrome-oxidase negative and able to ferment lactose at either 35°C or 37°C with the production of acid, gas and aldehyde within 24-48 hours.

Complete Treatment - means a series of combination of water treatment processes which shall include coagulation, adsorption, sedimentation, slow and rapid sand filtration, aeration and chlorination.

Contamination - means a general term referring to the introduction of materials not normally found in water that make the water less desirable or unfit for its intended use.

Deep Well - refers to a well with depth greater than 20 meters constructed in areas characterized by aquifers or water-bearing formations generally located at a depth of more than 20 meters below ground surface.

Disinfection - refers to a water treatment process designed to destroy disease-causing organisms. The efficacy of disinfection is often assessed by measuring the coliform group of indicator organism.

Doubtful Source - refers to a water supply facility or source that is subject to recontamination (e.g. open dug well, unimproved spring, surface water).

Drilled Well - refers to a well constructed by percussion or rotary drills.

Drinking Water - means a water intended for direct human consumption or for use in food preparation.

Driven Well - refers to a well constructed by driving an iron pipe with a well point at the lower end into the ground water bearing stratum.

Dug Well - refers to a well normally circular or rectangular in shape, with diameter ranging from 1 to 1.5 meters. After the well is dug, it is necessary to put a lining made of permanent materials like masonry, brickworks or reinforced concrete which serve as protection against surface or outside contamination. An open dug well shall mean a well dug manually or mechanically to draw water by the use of bucket or any container attached to a rope.

Groundwater - refers to that portion of the rainwater which has percolated into the earth to form underground deposits called aquifers.

Level I (point source) - refers to a protected well or a developed spring with an outlet but without a distribution system, generally adaptable for rural areas where the houses are thinly scattered. A Level I facility normally serves around 15 households.

Level II (communal faucet system or standposts) - refers to a system composed of a source, a reservoir, a piped distribution network and communal faucets, generally suitable for rural and urban fringe areas where houses are clustered densely to justify a simple piped system. Usually, one faucet serves 4 to 6 households.

Level III (waterworks system or individual house connections) -refers to a system with a source, a reservoir, a piped distribution network and household taps, generally suited for densely populated urban areas.

Most Probable Number (MPN) - means a statistical method of determining microbial populations. A multiple dilution tube technique is utilized with a standard medium and observations are made for specific individual tube effects. Resultant coding is translated by mathematical probability tables into population numbers.

Pipe Lines - refer to pipes used to transport water.

Polluted Water - refers to water whose physical, chemical, bacteriological, biological and radioactive properties have been altered due to the presence of domestic sewage, industrial waste or other substances in water that are possibly objectionable or harmful to human life.

Potable Water/Safe Drinking Water - refers to water that is free of microorganisms or disease-producing bacteria (Pathogens). In addition, the water should not possess undesirable taste, odor, color, levels of radioactivity, turbidity or chemicals and it should pass the standards of the Philippine National Standards for Drinking Water.

Public or Private Water Supply - refers to a government or privately owned system for the provision of potable water for human consumption. The water system could either be of Level I (point source), Level II (communal) or Level III (waterworks) type. The system includes: a) any collection, treatment, storage and distribution facilities under the control of the operator of such system and used primarily in connection thereto; and b) any collection, pre-treatment, or storage facilities not under the control of the operator of the system which are used primarily in connection with such system.

Reservoir - means a pond, lake or basin, either natural or artificial, designed for storage, regulation and control of water.

Sanitary Engineer - refers to a person duly registered with the Board of Examiners for Sanitary Engineers (R.A.1364) and who heads the sanitation division, section or unit of the health office or employed with the Department of Health or its field health units.

Sanitary Seals - refer to a mixture of cement and water placed in the annular space of the well casing and drill hole to seal space and about 3 meters deep to prevent the intrusion of water.

Sanitary Survey - means an activity to inspect and investigate the existing environmental conditions around the water source which may affect the quality of the water.

Shallow Well - means a well measured from the natural ground surface with a depth of not more than 20 meters.

Springs - mean a ground water seepage visible to earth's surface due to hydrostatic gradient or head.

Surface Water - refers to a mixture of surface run-off and groundwater. Surface sources include rivers, lakes, streams, ponds and impounding reservoirs.

Test Well - refers to an excavation made to determine the quality and quantity of water.

Use of water for domestic purposes - is the utilization of water for drinking, washing, bathing, cooking or other household needs, home gardens, and watering of lawns or domestic animals.

Use of water for municipal purposes - is the utilization of water for supplying the water requirements of the community.

Use of water for irrigation - is the utilization of water for producing agricultural crops.

Use of water for power generation - is the utilization of water for producing electrical or mechanical power.

Use of water for fisheries - is the utilization of water for the propagation and culture of fish as a commercial enterprise.

Use of water for livestock raising - is the utilization of water for large herds or flocks of animals raised as a commercial enterprise.

Use of water for industrial purposes - is the utilization of water in factories, industrial plants and mines, including the use of water as an ingredient of a finished product.

Use of water for recreational purposes - is the utilization of water for swimming pools, bath houses, boating, water skiing, golf courses and other similar facilities in resorts and other places of recreation.

Water Hauler - means any person, firm or company who transport, stores, delivers and operates equipment used to transport or deliver water for human consumption.

Water right - is the privilege granted by the government to appropriate and use water.

Water Supplier - means any entity, government or private company, responsible for source development, water abstraction, treatment and distribution of water.

Well - refers to a man-made hole used for recovering ground water from the water bearing strata by digging, boring, drilling or by any other method.

Well Driller - means an individual, partnership, corporation, cooperative and the like who undertake well drilling work or activities for the purpose of extracting ground water.

Article B. Ownership of Waters

Section 2B.01. Restatement of Art. 5, PD 1067. The provisions of Article 5, PD 1067 are hereby restated and adopted, viz:

The following enumerations belong to the State:

- a) Rivers and their natural beds;
- b) Continuous or intermittent waters of springs and brooks running in their natural beds and the beds themselves;
- c) Natural lakes and lagoons;

- d) All other categories of surface waters such as water flowing over lands, water from rainfall whether natural, or artificial, and water from agriculture runoff, seepage and drainage;
- e) Atmospheric water;
- f) Subterranean or ground waters; and,
- g) Seawater.

The following waters found on private lands belong to the State:

- a) Continuous or intermittent waters rising on such lands;
- b) Lakes and lagoons naturally occurring on such lands;
- c) Rain water falling on such lands;
- d) Subterranean or ground waters; and,
- e) Water in swamps and marshes.

Article C. Appropriation of Waters

Section 2C.01. Regulated Acts. No person, natural or juridical, shall use or appropriate any of the above mentioned water without first securing a permit therefore from the National Water Resources Council.

Section 2C.02. Exemption. The owner of the land where the water is found may use the same for domestic purposes without securing a permit therefore, provided that such use shall be registered with the Office of the (City or Municipal) Mayor concerned.

Subject to the provisions of this Code concerning the control, protection, conservation, and regulation of the appropriation and use of waters, any person may appropriate or use natural bodies of water without securing a water permit for any of the following:

- a) Appropriation of water by means of hand carried receptacles; and
- b) Bathing or washing, watering or dipping of domestic or farm animals, and navigation of watercrafts or transportation of logs and other objects by flotation.

Section 2C.03. Rules and Regulations. Subject to the provisions of this Code, any person who captures or collects water by means of cisterns, tanks, or pools shall have exclusive control over such water and the right to dispose of the same.

Water legally appropriated shall be subject to the control of the appropriator from the moment it reaches the appropriator's canal or aqueduct leading to the place where the water will be used or stored and, thereafter, so long as it is being beneficially used for the purposes for which it was appropriated.

Water may be appropriated for the following purposes:

- a) Domestic
- b) Municipal
- c) Irrigation

- d) Power generation
- e) Fisheries
- f) Livestock raising
- g) Industrial
- h) Recreational, and
- i) Other authorized purposes

Waters appropriated for a particular purpose may be applied for another purpose only upon prior approval of the National Water Resources Council and on condition that the new use does not unduly prejudice the rights of other permittees, or require an increase in the volume of water.

Except as otherwise herein provided, no person, including government instrumentalities or government-owned or controlled corporations, shall appropriate water without a water right, which shall be evidenced by a document known as a "water permit".

Only citizens of the Philippines, of legal age, as well as juridical persons, who are duly qualified by law to exploit and develop water resources, may apply for water permits.

Any person who desires to obtain a water permit shall file an application with the National Water Resources Council who shall make known said application to the public for any protests.

Water contained in open canals, aqueducts or reservoirs of private persons may be used by any person for domestic purpose or for watering plants as long as the water is withdrawn by manual methods without checking the stream or damaging the canal, aqueduct or reservoir; Provided, That this right may be restricted by the owner should it result in loss or injury to him.

Section 2C.04. Prohibited Acts.

No construction or works for the storage, diversion, distribution and utilization of water resources shall be undertaken without an adequate provision for the prevention and control of diseases that may be induced or spread by such works

No person shall re-use any waste water or distribute such water for human consumption unless it is demonstrated that such consumption will not adversely affect the health and safety of the public.

In the construction and operation of hydraulic works, due consideration shall be given to the preservation of scenic places and historical relics and, in addition to the provisions of existing laws, no works that would required the destruction or removal of such places or relics shall be undertaken without showing that the distribution or removal is necessary and unavoidable.

No construction of dams, bridges and other structures which may interfere with the flow of navigable or flitable waterways shall be undertaken without first securing a permit therefore from the duly authorized officer of the Department of Public Works and Highways.

No excavation for the purpose of emission of a hot spring or for the enlargement of the existing opening thereof shall be made without prior permit from the government agency concerned.

No person shall develop a hot spring for human consumption without first obtaining a permit therefore from the (City/Municipal) Health Officer concerned.

No person shall develop a stream, lake, or spring for recreational purposes without first securing a permit from the National Water Resources Council.

No person shall raise or lower the water level of a river stream, lake, lagoon, or marsh nor drain the same without a permit therefore from the National Water Resources Council.

No drainage systems shall be constructed that their outlets are rivers, lakes, the sea, natural bodies of water, or such other water course without a permit therefore from the government agency concerned.

No person shall drill a well to extract underground water for human consumption without a permit from the National Water Resources Council and a Sanitary Permit from the (City/Municipal Health Officer) concerned.

Article D. Establishment and Operation of Waterworks Systems

Section 2D.01. Regulated Acts. No person, natural or juridical, shall establish or operate a waterworks system including the delivery of water supply to consumers without first securing a “sanitary permit” therefore from the (City/Municipal) Health Officer concerned. This is a pre-requisite before the issuance of the corresponding Mayor’s Permit for the operation of such business undertaking.

Section 2D.02. Prescribed Standards and Procedures. Standards for drinking water and their bacteriological and chemical examinations, together with the evaluation of results, shall conform to the criteria set by the National Drinking Water Standards. The treatment of water to render it safe for drinking, and the disinfection of contaminated water sources together with their distribution system shall be in accordance with the procedures prescribed by the Department of Health pursuant to the provisions of PD 856..

Section 2D.03. Authority of the City/Municipal Health Officer. The approval of the (City/Municipal) Health Officer or that of his duly authorized representative is required in the following cases:

- a) Sites of water sources before their construction;
- b) Delivery of water to consumers from new or recently repaired water systems;
- c) Operation of a water system after an order of closure was issued by the Department of Health (DOH);
- d) Plans and specifications of water system of subdivisions and projects prior to the construction of housing units thereat; and
- e) Certification of potability of drinking water.

Section 2D.04. Types of Water Examinations Required. The following examinations are required for drinking water:

- a) **Initial examination** - the physical, chemical and bacteriological examination of water from newly constructed systems or sources are required before they are operated and opened for public use. Examination of water for possible radioactive contamination should also be done initially.
- b) **Periodic examination** - Water from existing sources is subject to bacteriological examination as often as possible but the interval shall not be longer than six

months, while general systematic chemical examination shall be conducted every 12 months or oftener. Examination of water sources shall be conducted yearly for possible radioactive contamination.

Section 2D.05. Examining Laboratories and Submission of Water Samples - The examination of drinking water shall be performed only in private or government laboratories duly accredited by the Department of Health. It is the responsibility of operators of water systems to submit to accredited laboratories water samples for examination in a manner and at such intervals prescribed by the Department of Health..

Section 2D.06. Other protective Measures - To protect drinking water from contamination, the following measures shall be observed and complied with:

- a) Washing clothes or bathing within a radius of 25 meters from any well or other source of drinking water is hereby prohibited.
- b) No artesian, deep or shallow well shall be constructed within 25 meters from any source of pollution.
- c) No radioactive sources or material shall be stored within a radius of 25 meters from any well or source of drinking water unless the radioactive source is adequately safely enclosed by proper shielding.
- d) No person charged with the management of a public water supply system:
 - shall permit any physical connection between its distribution system and that of any other water supply, unless the latter is regularly examined as to its quality by those in charge of the public supply system to which the connection is made and found to be safe and potable.
 - permit or allow the installation of booster pump to boost water direct from the water distribution line of water supply system, where low-water pressure prevails.

Section 2D.07. Standard Parameters and Values for Drinking Water. Before water is used, distributed or sold for drinking, it should pass the criteria on standard parameters and values for bacteriological, physical, chemical, biological and radiological quality set by the Philippine National Standards for Drinking Water.

Section 2D.08. Water Treatment. Treatment is necessary so as to render water supply potable. The degree and manner of treatment will depend on the quality of the raw water, however, the bacteriological quality shall be used as the main criterion. No water supplier shall be allowed to operate water system for public use unless necessary treatment has been provided.

For the purpose of classifying and evaluating raw-water quality with respect to its treatment requirements, the following criteria shall be used:

1. **Group I. Water Requiring Disinfection Only.** Water from underground or surface sources subject to a low degree of contamination, and having a MPN of coliform organisms not exceeding 50 per 100 ml.
2. **Group II. Water Requiring Complete Treatment.** Water from underground or surface sources having a MPN of coliform organisms 50 per 100 ml. To not more than 5,000 per 100 ml.

Section 2D.09. Water Disinfection. Disinfection of water facilities shall be required for the following:

1. Newly constructed water supply facilities
2. Water supply facility that has been repaired/improved.
3. All existing water facilities that exceeded the bacteriological value set by the Philippine National Standards for Drinking Water.
4. All water facilities that require continuous disinfection.
5. Drinking water collected from a doubtful source.

Chlorine shall be used as main water disinfectant. Other disinfectant may be used provided that it has residual effect to ensure disinfecting capacity in the distribution system.

Section 2D.10. Standard Construction and Operating Procedure

A. Ground Water Source

a. Well. The location of well site shall conform to the following requirements:

- 1) No well site shall be located within a distance of less than 25 meter radius on flat areas from sewage treatment plant, sewage wet well, sewage pumping station, or a drainage ditch which contains industrial waste discharges or wastes from sewage treatment systems, sanitary landfill or land irrigated by sewage treatment plant effluent, sanitary sewers, septic tanks, cesspools, open-jointed drain-fields, animal feed lots or livestock in pastures, dump grounds, especially in limestone areas. Storm and sanitary sewers located within specified distances shall be so constructed as to prevent leakage.
- 2) The drilling of water well within 50 meter distance from a cemetery is prohibited.

During drilling operation, the following requirements shall be observed:

- 1) The premises, materials, tools and drilling equipment shall be properly maintained to minimize contamination of under-ground water.
 - a. Water used in drilling operation shall be potable.
 - b. Slush pit shall be constructed and maintained to minimize contamination of the drilling mud.
 - c. Approved type of privy or toilet facilities for use of drilling personnel shall be provided. These facilities shall be located 25 meters from the well being drilled. Upon completion of the constructed well, toilet facilities if temporarily constructed shall be removed in a satisfactory manner. No temporary and permanent toilet facilities shall be maintained within 25 meters from the well being constructed unless they are of the sealed or leak proof types.

- 2) Casing materials used in the construction of public wells shall conform with the American Standards for Testing Materials (ASTM). The casing shall extend at least to the depth of the shallowest water formation or deeper if necessary to omit undesirable water bearing strata.
- 3) The annular space between the casing and the drill hole shall be sealed with neat cement grout to the minimum depth of 3.0 meters for shallow wells and 10.0 m for deep wells.
- 4) In all cases, provide a concrete apron at least 2 meter square around the well head, sloped not less than 2% to drain away excess water.
- 5) Provide vent with #16-mesh corrosion resistance screen, faced downward and elevated to minimize drawing of contaminants into the well. Seal well heads and pump bases using gaskets, sealing compounds and proper venting to prevent possible contamination to the well water.
- 6) A complete physical and chemical analysis of water from a new well shall be constructed after 36 hours of pumping out of water is done.
- 7) If the results show that the water is bacteriologically positive (+), appropriate water treatment facilities shall be provided, otherwise the well shall be abandoned. The well shall be disinfected in accordance with the standard requirement set by these rules and regulations. Collect two water samples for two-week interval for bacteriological analysis.
- 8) When contamination of a well water source has been confirmed by laboratory test and the sources of contamination is definitely known but cannot be removed, the well must be condemned. The well opening must be plugged or sealed with concrete or other similar materials. If used for other purposes like watering gardens and washing clothes a signboard marked "Water Unfit For Drinking" shall be installed.
- 9) Pump site, rapid pump room location and pump installation:
 - a. All completed well units shall be preferably protected by fences, gates provided with locks, or enclosed to prevent possible contamination or damage of facilities by trespassers.
 - b. The well site shall be properly graded to insure proper ground maintenance and to draw off surface water effectively from the well. In all cases, provide a system that draws off water from the pump well, leakage from packed gravel, and floor drainage by installing suitable drain pipes located at the edge of the concrete floor to prevent ponding around the well head. This waste water shall be properly disposed. Drains shall not be directly connected to storm or sanitary sewers.
 - c. In water supply installation at subground level, pump rooms and pump pits are prohibited. Pump room floor shall be at least 60 cm. Above the highest known flood level and/or adequately protected from possible damage by flood waters.

b. Springs

- a. Intake box or enclosure must be watertight, made of concrete, vitrified tile or other material extending to the water bearing strata down to the bed rocks or other impervious formations.
- b. The intake box must be provided with a water tight cover which extends over the top edge of the spring box at least 50 mm.
- c. A drain pipe with an exterior valve is to be placed close to the string box near the bottom. The pipe shall extend horizontally so as to clear the normal ground level of the point of discharge by at least 150 mm.. the discharge end of the pipe shall be screened to prevent the entrance of rodents or insects.
- d. The spring is to be provided with screened overflow pipe located slightly below the maximum water level elevation. A drain apron is to be provided to prevent soil erosion at the point of overflow discharge.
- e. The supply outlet from the developed spring is to be located about 150 mm. Above the drain outlet and screened.
- f. Manhole opening shall have a watertight curb with edges projecting a minimum of 100 mm. above the level of the surrounding surface. The edges of the manhole cover shall overlap the curb and project downward a minimum of 50 mm.
- g. Care shall be taken in casting openings to insure watertight connection between the wall and the openings.
- h. A drainage ditch located at least 25 meters away on the uphill side of the spring shall be constructed to prevent contamination and flooding of the water source.
- i. The intake box shall be properly enclosed preferably constructed of strong materials. The height of the fence shall be at least 1-1/2 meter high. The enclosed area shall be maintained clean to eliminate harborage and breeding of insects.
- j. Washing and bathing within 25 meters radius of the spring is prohibited.
- k. Protection of the entire catchment area is a must. No dwellings shall be constructed within the catchment area and it shall be off-limits to people and animals.
- l. Collect water samples regularly as prescribed by the Philippine National Standards for Drinking Water.

Section 2D.11. Requirements for Sites Clearance of Drinking Water Sources. Any person who intends to drill, construct, alter or repair water supply system, shall first secure a "Drinking Water Site Clearance" from the (City/Municipal) Mayor thru the (City/Municipal) Health Officer concerned prior to the start of the work or construction therein. The approval of the application shall be based on the recommendation made by the City/Municipal Health Officer after the conduct of the sanitary survey. The sanitary survey report shall contain all pertinent information concerning the water source and possible sources of contamination.

Major water supply projects particularly of surface water sources that fall under the Environmental Impact Statement System are exempted from site clearance requirements, provided an Environmental Health Impact Assessment has been conducted as part of the Environmental Impact Assessment.

If the work on the individual water supply system failed to commence within six (6) months from date of issuance, the site clearance shall automatically expire.

Section 2D.12. *Delivery of Water to Consumers from New or Recently Repaired Water Systems.* Permit to deliver water to consumers from new or recently repaired water system shall be granted only if:

1. Final inspection by the local health officer proves that the water supply system was constructed in accordance with the submitted plans and specifications.
2. The disinfection of water supply system conformed with the requirements imposed under this Chapter. .
3. Results of laboratory analysis proved that the water quality meets the Philippine National Standards for Drinking Water.
4. The water supplier or the owner of the completed water supply system shall notify the local health officer of the completed system.

Section 2D.13. *Resumption of the Operation of Water Supply System.* In cases when water supply is found to be unsafe or unfit for human consumption, the operator of the system, shall be ordered by the Mayor upon the recommendation of the (City/Municipal) Health Officer concerned to:

- a. Stop temporarily its operations in order to make the necessary corrections within a specified period.
- b. Provide substantial quantity and good quality of water to the affected consumers during the correction period. Failure to provide emergency water supply shall be subjected to fines and penalties. A permission to re-operate from the (City/Municipal) Mayor upon the recommendation of the (City/Municipal) Health Officer shall be given only when all defects have been corrected and the water has been found safe for drinking and domestic use.

Section 2D.14. *Submission of Plans and Specifications of Water System of Subdivision and Projects prior to the Construction of Housing Units thereat.*

1. To obtain approval for the construction of any water supply system, the applicant shall submit to the Office of the (City/Municipal) Health Officer concerned the plans and specifications of the proposed systems, and satisfy the standard requirements of this Chapter.

Plans and specifications shall be prepared by a registered civil/sanitary engineer, the seal, signature and registration number of the engineer of the engineering firm shall be imprinted on each sheet of the plan.

2. An engineering report or feasibility study of the new system shall be submitted with or prior to the submission of the plans and specifications.

The report coverage shall include the following items.

- a. Statement of the problem or problems.
 - b. Present and future areas to be served, with population data.
 - c. The source, quantity and quality of water.
 - d. Present and estimated future maximum and minimum water quantity demands.
 - e. Description of the proposed site and the immediate surroundings of the waterworks units.
 - f. The type of water treatment, equipment and capacity of units.
 - g. Basic design data, pumping capacity, water storage, and flexibility of system operation.
 - h. Adequacy of facilities concerning volume/quantity and pressures in the whole system.
 - i. Cost estimate of the facility and source of funds for the project;
 - j. Sustainability and maintenance.
3. For subdivisions having groundwater source, report on the estimated specific yield of the aquifer and other results of the pumping tests shall be submitted together with the borehole logs.
 4. Two (2) sets of all plans and drawings shall be submitted which:
 - a. Indicate location of all facilities pertinent to the specific project.
 - b. If phase construction is anticipated, the overall plan shall be presented, though a portion of the construction is approved.
 - c. A plan of the subdivision or other housing projects to be served

Section 2D.15. Certification of the Potability of Drinking Water No public water system shall be allowed to operate without a “Certificate of Potability” issued by the (City/Municipal) Health Officer concerned or his duly authorized representative. This certificate shall be issued only after the required examinations are performed and the quality of water from the system meets the requirements of the Philippine National Standard for Drinking Water.

The certificate shall be re-validated after every examinations based on the standard interval or frequency of sampling.

Section 2D.16. Types of Water Examinations Required

The following examinations are required for drinking water:

- a. **Initial examination** -The physical, chemical and bacteriological examinations of water from newly constructed systems or source are required before they are operated and opened for public use. Examination of water possible radioactive contamination should be done initially.

- b. ***Periodic examination*** - water from existing sources is subject to bacteriological examination as often as possible but the interval shall not be longer than six months, while the general systematic physico-chemical examination shall be conducted every 12 months or oftener. Examination of water sources shall be conducted yearly for possible radioactive contamination.

Section 2D.17. *Submission of Water Samples for Laboratory Examination.*

- a. The examination of samples of drinking water shall be performed only in laboratories (private/government) which are duly licensed and accredited by the Department of Health. It shall be the responsibility of the operators of water systems to submit to accredited laboratories water samples for examination in a manner and at intervals prescribed in the Philippine National Standards for Drinking Water.
- b. Any person, firm or corporation desiring to establish or operate and maintain a water analysis laboratory shall apply to the Bureau of Research and Laboratories, Department of Health through the Regional Field Health Office. Approval of accreditation shall be based on the prescribed requirements of the Department as stated in Administrative Order No. 31 series 1979. Water laboratories maybe accredited for separate services like bacteriological, chemical, radiological, physical, biological or for a combination of two or more or all of these services.

Section 2D.18. *Other Protective and Management Measures*

To protect drinking water from contamination, the following measures shall be observed:

- 1) Washing clothes or bathing within a radius of 25 meters from any well or other source of drinking water is prohibited.
- 2) No artesian, deep or shallow well, shall be constructed within 25 meters from any source of pollution.
- 3) No radioactive source or material shall be stored within a radius of 25 meters from any well or source of drinking water unless the radioactive source is adequately and safely enclosed by proper shielding.
- 4) No person charged with the management of a public water supply system shall permit any physical connection between its distribution system and that of any other water supply, unless the latter is regularly examined as to its quality by those in charge of the public supply to which the connection is made and found to be potable.

Section 2D.19. *Applicability of other Issuances.* The existing rules and regulations implementing PD 856 (Code on Sanitation of the Philippines); the provisions of DENR Administrative Order No. 34, series of 1990, otherwise known as the "Revised Water Usage and Classification", as amended, and other issuances of national government agencies pertaining to water resources management are hereby adopted and made an integral part of this Chapter.

Article E. Protection and Management of (City/Municipal) Waters

Section 2E.01. *Statement of Policy.* It is hereby declared a policy of the provincial government to prevent and control the pollution of the city and municipal waters in this province by the dumping of wastes and other waste matter which create hazards to human health, harm

living resources and marine life, damage amenities, or interfere with the legitimate uses of the aforesaid water.

Section 2E.02. Definition of Terms. - As used in this Chapter, the term:

City Water - includes not only streams, lakes and tidal waters within the city, not being the subject of private ownership, and not comprised with the national parks, public forests, timber lands, forest reserves, but also marine waters included between two (2) lines drawn perpendicularly to the general coastline from points where the boundary lines of the city touch the sea at low tide and a third line parallel with general coastline and fifteen (15) kilometers from it. Where the city and municipality are so situated on the opposite shores that there is less than fifteen (15) kilometers of marine waters between them, the third line shall be a line equidistant from the opposite shores of the respective cities or municipalities.

Municipal Water - includes not only streams, lakes and tidal waters within the municipality, not being the subject of private ownership, and not comprised with the national parks, public forests, timber lands, forest reserves, but also marine waters included between two (2) lines drawn perpendicularly to the general coastline from points where the boundary lines of the municipality touch the sea at low tide and a third line parallel with general coastline and fifteen (15) kilometers from it. Where the cities or municipalities are so situated on the opposite shores that there is less than fifteen (15) kilometers of marine waters between them, the third line shall be a line equidistant from the opposite shore of the respective cities or municipalities.

Discharge - includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

Dumping - means any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea, but does not include (1) the disposal at sea of wastes or other matter incidental to or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, nor (2) the disposal of wastes or other matter directly arising from or related to the exploitation and associated off-shore processing of seabed mineral resources.

Oil - means oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredge spoil.

Ocean Waters - mean all marine waters other than the territorial sea and inland waters of the Philippines and other states.

Public Vessel - means a vessel owned or bareboat chartered and operated by the Republic of the Philippines, and political subdivision thereof, or by a foreign nation, except when such a vessel is engaged in commerce.

Tank vessel- means any vessel especially constructed or converted to carry liquid bulk cargo in tanks.

Tank barge - means any tank vessel not equipped with a means of self propulsion.

Vessel - means every description of watercraft, or other artificial contrivance used, or capable of being used, as a means of transportation on water.

Person - means an individual, partnership, corporation, or association any owner, master, officer or employee of the Republic of the Philippines.

Section 2E.03. *Regulated Acts.* No person, natural or juridical, shall throw, discharge, or deposit, or cause, suffer, or procure to be thrown, discharged, or deposited either from or out of any ship, barge, or other floating craft of any kind, or from the shore, wharf, manufacturing establishment, or mill of any kind, any refuse matter of any kind or description whatever other than that flowing from streets and sewers and passing therefrom in a liquid state, into any navigable water within the jurisdiction of this province or into any tributary of any navigable water from which the same shall float or be washed into such navigable water; and it shall be unlawful to deposit, or cause, suffer or procure to be deposited material of any kind in any place on the bank of any navigable water or on the bank of any tributary of any navigable water, where the same shall be liable to be washed into such navigable water, either by ordinary or high tides, or by storms or floods, or otherwise, whereby navigation shall or may be impeded or obstructed or increase the level of pollution of such waters: Provided, that nothing herein contained shall extend to, apply to, or prohibit the operations in connection with the improvement of navigable waters or construction of public works;

Section 2E.04. *Prohibition Against Discharge of Oil and Other Harmful Substances.* Except in cases of emergencies imperiling the life or property, or unavoidable accident, collision, or stranding, and except as otherwise permitted by regulations prescribed by the Philippine Coast Guard, it shall be unlawful for any person to discharge, or suffer, or permit the discharge of oil, noxious liquid substances and other harmful substances, by any method, means or manner into or upon the territorial and inland city and municipal waters of this province.

Article F. Administrative Provisions

Section 2F.01. *Issuance of Implementing Guidelines.* The Provincial Governor or his duly authorized representative shall issue the implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 2F.02. *Penalty.* Any violation of the provisions of this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER III
PROTECTION, CONSERVATION AND MANAGEMENT OF FOREST RESOURCES**

Article A. General Information

Section 3A.01. *Declaration of Policies.* The provincial government hereby adopts the following policies:

- a) The multiple uses of forest lands shall be oriented to the development and progress requirements of the country, the advancement of science and technology, and the public welfare;
- b) Land classification and survey shall be systematized and hastened;
- c) The establishment of wood-processing plants shall be encouraged and rationalized; and
- d) The protection, development and rehabilitation of forest lands shall be emphasized so as to ensure their continuity in productive condition.

Section 3A.02. *Definitions.* As used in this Article the term:

Public forest - is the mass of lands of the public domain which has not been the subject of the present system of classification for the determination of which lands are needed for forest purposes and which are not.

Permanent forest or forest reserves - refers to those lands of the public domain which have been the subject of the present system of classification and determined to be needed for forest purposes.

Alienable and disposable lands - refer to those lands of the public domain which have been the subject of the present system of classification and declared as not needed for forest purposes.

Forest lands - include the public forest, the permanent forest or forest reserves, and forest reservations.

Grazing land - refers to that portion of the public domain which has been set aside, in view of the suitability of its topography and vegetation, for the raising of livestock.

Mineral lands - refer to those lands of the public domain which have been classified as such by the Secretary of Natural Resources in accordance with prescribed and approved criteria, guidelines and procedure.

Forest reservations - refer to forest lands which have been reserved by the President of the Philippines for any specific purpose or purposes.

National park - refers to a forest land reservation essentially of primitive or wilderness character which has been withdrawn from settlement or occupancy and set aside as such exclusively to preserve the scenery, the natural and historic objects and the wild animals or plants therein, and to provide enjoyment of these features in such a manner as will leave them unimpaired for future generations.

Game refuge or bird sanctuary - refers to a forest land designated for the protection of game animals, birds and fish and closed to hunting and fishing in order that the excess population may flow and restock surrounding areas.

Marine parks - refer to any off-shore area inhabited by rare and unique species of marine flora and fauna.

Seashore park - refers to any public shore area delimited for outdoor recreation, sports fishing, water skiing and related healthful activities.

Watershed reservation - is a forest land reservation established to protect or improve the conditions of the water yield thereof or reduce sedimentation.

Watershed - is a land area drained by a stream or fixed body of water and its tributaries having a common outlet for surface run-off.

Critical watershed - is a drainage area of a river system supporting existing and proposed hydro-electric power and irrigation works needing immediate rehabilitation as it is being subjected to a fast denudation causing accelerated erosion and destructive floods. It is closed from logging until it is fully rehabilitated.

Mangrove - is a term applied to the type of forest occurring on tidal flat along the sea coast, extending along streams where the water is brackish.

Kaingin - is a portion of the forest land, whether occupied or not, which is subjected to shifting and/or permanent slash-and-burn cultivation having little or no provision to prevent soil erosion.

Forest product - means timber, pulpwood, firewood, bark, tree top, resin, gum, wood, oil, honey, beeswax, nipa, rattan, or other forest growth such as grass, shrub, and flowering plant, the associated water, fish, game, scenic, historical, recreational and geologic resources in forest lands.

Dipterocarp forest - is a forest dominated by trees of the dipterocarp species, such as red *lauan*, *tengile*, *tiaong*, white *lauan*, *almon*, *bagtikan* and *mayapis* of the Philippine mahogany group, *apitong* and the *yakals*.

Industrial tree plantation - is any tract of forest land purposely and extensively planted to timber crops primarily to supply the raw material requirements of existing or proposed processing plants and related industries.

Tree farm - refers to any tract of forest land purposely and extensively planted to trees of economic value for their fruits, flowers, leaves, barks, or extractives, but not for the wood thereof.

Multiple-use - is the harmonized utilization of the numerous beneficial uses of the land, soil, water, wildlife, recreation value, grass and timber of forest lands.

Selective logging - means the systematic removal of the mature, over-mature and defective trees in such manner as to leave adequate number and volume of healthy residual trees of the desired species necessary to assure a future crop of timber, and forest cover for the protection and conservation of soil and water.

Seed tree system - is partial clear-cutting with seed trees left to regenerate the area.

Healthy residual - is a sound or slightly injured tree of the commercial species left after logging.

Sustained-yield management - implies continuous or periodic production of forest products in a working unit with the aid of achieving at the earliest practicable time an approximate balance between growth and harvest or use. This is generally applied to the commercial timber resources and is also applicable to the water, grass, wildlife, and other renewable resources of the forest.

Processing plant - is any mechanical set-up, machine or combination of machine used for the processing of logs and other forest raw materials into lumber, veneer, plywood, wallboard, block-board, paper board, pulp, paper or other finished wood products.

Lease - is a privilege granted by the State to a person to occupy and possess, in consideration of a specified rental, any forest land of the public domain in order to undertake any authorized activity therein.

License - is a privilege granted by the State to a person to utilize forest resources as in any forest land, without any right of occupation and possession over the same, to the exclusion of others, or establish and operate a wood-processing plant, or conduct any activity involving the utilization of any forest resources.

License agreement - is a privilege granted by the State to a person to utilize forest resources within any forest land with the right of possession and occupation thereof to the exclusion of others, except the government, but with the corresponding obligation to develop, protect and rehabilitate the same in accordance with the terms and conditions set forth in said agreement.

Permit - is a short-term privilege or authority granted by the State to a person to utilize any limited forest resources or undertake a limited activity with any forest land without any right of occupation and possession therein.

Annual allowable cut - is the volume of materials, whether of wood or other forest products, that is authorized to be cut regularly from the forest.

Cutting cycle - is the number of years between major harvests in the same working unit and/or region, within a rotation.

Ecosystem - means the ecological community considered together with non-living factors and its environment as a unit.

Silviculture - is the establishment, development reproduction and care of forest trees.

Rationalization - is the organization of a business or industry using scientific business management principles and simplified procedures to obtain greater efficiency of operation.

Forest officer - means any official or employee of the Bureau who, by the nature of his appointment or the function of the position to which he is appointed, is delegated by law or by competent authority to execute, implement or enforce the provisions of this Code, other related laws, as well as their implementing regulations.

Primitive tribe - is a group of endemic tribe living primitively as a distinct portion of a people from a common ancestor.

Private right - means or refers to titled rights of ownership under existing laws, and in the case of primitive tribes, to rights of possession existing at the time a license is granted under this Code, which possession may include places of abode and worship, burial grounds, and old clearings, but excludes production forest inclusive of logged-over areas, commercial forests and established plantations of forest trees and trees of economic value.

Person - includes natural as well as juridical person.

Section 3A.03. *Regulated Acts.*

- 1) No person shall utilize, exploit, occupy, possess or conduct any activity within any forest land, or establish and operate any wood-processing plant, unless he has been authorized to do so under a license agreement, lease, license, or permit thereof from the DENR thru the Forest Management Bureau or its duly authorized representative.
- 2) No person, natural or juridical, shall enter, occupy, or utilize any timber in any forest lands and gather any forest resources thereof without proper authorization from the Forest Management Bureau thru its duly authorized representative or through license agreements under which the holders thereof shall have the exclusive privilege to cut all the allowable harvestable timber in their respective

concessions, and the additional right of occupation, possession, and control over the same, to the exclusion of all others, except the government, but with the corresponding obligation to adopt all the protection and conservation measures to ensure the continuity of the productive condition of said areas, conformably with multiple use and sustained yield management. If the holder of a license agreement over a forest area expressly or impliedly waives the privilege to utilize any softwood, hardwood or mangrove species therein, a license may be issued to another person for the harvest thereof without any right of possession or occupation over the areas where they are found, but he shall, likewise, adopt protection and conservation measures consistent with those adopted by the license agreement holder in the said areas.

- 3) No person shall cut, gather and/or collect timber or other forest products from any forest land, or timber from alienable and disposable public lands, or from private lands, without any authority under a license agreement, lease, license or permit from the DENR thru the Forest Management Bureau. Any person found to be committing such acts shall be considered guilty of qualified theft as defined and punished under Articles 309 and 310 of the Revised Penal Code; Provided, That in the case of partnership, association or corporation, the officers who ordered the cutting, gathering or collecting shall be liable, and if such officers are aliens, they shall, in addition to the penalty, be deported without further proceedings on the part of the Commission on Immigration and Deportation. The Court shall further order the confiscation in favor of the government of the timber or forest products cut, gathered, collected or removed, and the machinery, equipment, implements and tools used therein, and the forfeiture of his improvements in the area.

The same penalty plus cancellation of his license agreement, lease, license or permit and perpetual disqualification from acquiring any such privilege shall be imposed upon any licensee, lessee, or permittee who cuts timber from the licensed or leased area of another, without prejudice to whatever civil action the latter may bring against the offender.

- 4) ***Unlawful occupation or destruction of forest lands.*** No person shall enter, occupy or possess, or undertake “*kaingin*” farming for his own private use or for others any forest land without proper authorization from the DENR thru the Forest Management Bureau under a license agreement, lease, license or permit, or in any manner destroy such forest land or part thereof, or cause any damage to the timber stand and other products and forest growths found therein, or who assists, aids or abets any other person to do so, or sets a fire, or negligently permits a fire to be set in any forest land
- 5) ***Pasturing Livestock.*** No person shall, without authority under a lease or permit from the DENR thru the Forest Management Bureau, graze or cause to graze livestock in forest lands, grazing lands and alienable and disposable lands which have not as yet been disposed of in accordance with the Public Land Act; Provided, That in case the offender is a corporation, partnership or association, the officers and directors thereof shall be held liable.
- 6) ***Illegal occupation of national parks system and recreation areas and vandalism therein.*** No person shall, without a permit from the DENR thru the Forest Management Bureau, occupy for any length of time any portion of the national parks system or shall, in any manner, cut, destroy, damage or remove timber or any species of vegetation or forest cover and other natural resources found therein, or shall mutilate, deface or destroy objects of natural beauty or of scenic value within the areas in the national parks system.

Section 3A.04. Rules and Regulations.

- 1) The utilization of timber in alienable and disposable lands, private lands, civil reservations, and all lands containing standing or felled timber, including those under the jurisdiction of other government agencies, and the establishment and operation of saw-mills and other wood-processing plants, shall be in accordance with a license agreement, license, lease or permit granted by the DENR thru the Forest Management Bureau upon recommendation or clearance from the (city/municipal) mayor concerned.
- 2) No land of the public domain eighteen per cent (18%) in slope or over shall be classified as alienable and disposable, nor any forest land fifty per cent (50%) in slope or over, as grazing land.
- 3) Lands eighteen per cent (18%) in slope or over which have already been declared as alienable and disposable shall be reverted to the classification of forest lands to form part of the forest reserves, unless they are already covered by existing titles or approved public land application, or actually occupied openly, continuously, adversely and publicly for a period of not less than thirty (30) years as of the effectivity of PD 705, where the occupant is qualified for a free patent under the Public Land Act: Provided, That said lands, which are not yet part of a well-established communities, shall be kept in a vegetative condition sufficient to prevent erosion and adverse effects on the lowlands and streams: Provided, further, That when public interest so requires, steps shall be taken to expropriate, cancel defective titles, reject public land application, or eject occupants thereof.
- 4) The following lands, even if they are below eighteen per cent (18%) in slope, are needed for forest purposes, and may not, therefore, be classified as alienable and disposable land, to wit:
 - a) Areas less than 250 hectares which are far from, or are not contiguous with, any certified alienable and disposable land;
 - b) Isolated patches of forest of at least five (5) hectares with rocky terrain, or which protect a spring for communal use;
 - c) Areas which have already been reforested;
 - d) Areas within forest concessions which are timbered or have good residual stocking to support an existing, or approved to be established, wood processing plant;
 - e) Ridge tops and plateaus regardless of size found within, or surrounded wholly or partly by, forest lands where headwaters emanate;
 - f) Appropriately located road-rights-or-way;
 - g) Twenty-meter strips of land along the edge of the normal high waterline of rivers and streams with channels of at least five (5) meters wide;
 - h) Strips of mangrove or swamplands at least twenty (20) meters wide, along shorelines facing oceans, lakes, and other bodies of water, and strips of land at least twenty (20) meters wide facing lakes;

- i) Areas needed for other purposes, such as national parks, national historical sites, game refuges and wildlife sanctuaries, forest station sites, and others of public interest; and
- j) Areas previously proclaimed by the President as forest reserves, national parks, game refuge, bird sanctuaries, national shrines, national historic sites:

Provided, That in case an area falling under any of the foregoing categories shall have been titled in favor of any person, steps shall be taken, if public interest so requires, to have said title cancelled or amended, or the titled area expropriated.

- 5) Only the utilization, exploitation, occupation or possession of any forest land, or any activity therein, involving one or more of its resources, which will produce the optimum benefits to the development and progress of the country and the public welfare, without impairment or with the least injury to its other resources, shall be allowed.
- 6) All forest reservations may be opened to uses not inconsistent with the principal objectives of the reservation: Provided, That critical watersheds and national parks shall not be subject to logging operations.
- 7) In any logging operations in production forests within forest lands, the proper silvicultural and harvesting systems that will promote optimum sustained yield shall be practiced.
 - a) For dipterocarp forest, selective logging shall be practiced.
 - b) For pine forest, the seed tree system with planting when necessary shall be practiced.
 - c) For other types of forest, the silvicultural and harvesting system that will be found suitable by research shall be applied. In the meantime, a system based on observation and practices abroad may be adopted initially.
 - d) Any practiced system are subject to modification or changes based on research findings.
- 8) Strips of mangrove forest bordering numerous islands which protect the shoreline, the shoreline roads, and even coastal communities from the destructive force of the sea during high winds and typhoons, shall be maintained and shall not be alienated. Such strips must be kept from artificial obstruction so that flood water will flow unimpeded to the sea to avoid flooding or inundation of cultivated areas in the upstream. All mangrove swamps set aside for coast-protection purposes shall not be subject to clear-cutting operation.
- 9) Mining operations in forest lands shall be conducted with due regard to protection, development and utilization of other surface resources.
- 10) Location, prospecting, exploration, utilization or exploitation of mineral resources in forest reservations shall be governed by Mining laws, rules and regulations. No location, prospecting, exploration, utilization, or exploitation of mineral resources inside forest concessions shall be allowed unless proper notice has been served upon the licensees thereof and the prior approval of the Director, secured.

- 11) Mine tailings and other pollutants affecting the health and safety of the people, water, fish, vegetation, animal life and other surface resources, shall be filtered in silt traps or other filtration devices and only clean exhausts and liquids shall be released therefrom.
- 12) Surface-mined areas inside forest lands shall be restored to as near its former natural configuration or as approved by the Forest Management Bureau prior to its abandonment by the mining concern.
- 13) Roads and other infrastructure in forest lands shall be constructed with the least impairment to the resource values thereof. Government agencies undertaking the construction of roads, bridges, communications, and other infrastructure and installations inside forest lands, shall coordinate with the duly authorized representative of the Forest Management Bureau, especially if it will involve the utilization or destruction of timber and/or other forest resources, or watershed disturbance therein, in order to adopt measures to avoid or reduce damage or injury to the forest resource values. They shall likewise extend assistance in the planning and establishment of roads, wharves, piers, port facilities, and other infrastructure in locations designated as wood-processing centers or for the convenience of wood-based industries.
- 14) In order to coincide and conform to government plans, programs, standards, and specifications, holders of license agreements, licenses, leases and permits shall not undertake road or infrastructure construction or installation in forest lands without the prior approval of the Forest Management Bureau thru its duly authorized representative, or in alienable and disposable lands, civil reservations and other government lands, without the approval of the government agencies having administrative jurisdiction over the same.
- 15) All roads and infrastructure constructed by holders of license agreements, licenses, leases and permits belong to the State and the use and administration thereof shall be transferred to the government immediately upon the expiration or termination thereof. Prior thereto the Bureau may authorize the public use thereof, if it will not be detrimental to forest conservation measures.
- 16) All individuals, partnerships or corporations engaged in the exploitation of natural resources like those engaged in mining, quarrying, or construction dams, irrigation systems, roads and bridges and other infrastructure projects, as well as those engaged in similar or related operations or activities, shall, to the fullest extent possible, restore, rehabilitate, and return the lands, rivers, and natural environment subject thereof or affected thereby to their original conditions as of before such operations or activities. (*Restatement of PD. 1198*).

Section 3A.05. *Establishment of boundaries of forest lands.* All boundaries between permanent forests and alienable and disposable lands shall be clearly marked and maintained on the ground, with infrastructure or roads, or concrete monuments at intervals of not more than five hundred (500) meters in accordance with established procedures and standards, or any other visible and practicable signs to insure protection of the forest.

Article B. Forestry Management Policies

Section 3B.01. *Delineation of boundaries of forest lands.* Component cities and municipalities of this province, thru its officials concerned, in coordination or partnership efforts with the DENR, are hereby mandated to mark or cause the markings of all boundaries between permanent forests and alienable and disposable lands by installing appropriate signs or concrete

monuments on the ground at intervals of not more than five hundred (500) meters or any other visible and practicable signs to ensure protection of the forest.

Section 3B.02. *Regulated Acts.* No person, natural or juridical, shall utilize, exploit occupy, or possess any forest land, or conduct any activity therein, involving one or more of forestry resources without securing a permit therefore from both the City/Municipal Mayor and the duly authorized representative of the DENR.

Section 3B.03. *Utilization and Management of Forest Resources.* The numerous beneficial uses of the timber, land, soil, water, wildlife, recreation value and grass of forest lands shall be evaluated and weighted before allowing the utilization, exploitation, occupation or possession thereof, or the conduct of any activity therein.

Only the utilization, exploitation, occupation or possession of any forest land, or any activity therein, involving one or more of its resources, which will produce the optimum benefits to the development and progress of the country and the public welfare, without impairment or with the least injury to its other resources, shall be allowed.

Section 3B.04. *Ban on Logging Operation.* Logging operations inside forest reservations, critical watersheds and national parks are hereby totally banned.

Section 3B.05. *License agreement, license, lease or permit.* No person, natural or juridical, shall utilize, exploit, occupy, possess or conduct any activity within any forest land, or establish and operate any wood-processing plant, unless he has been granted a license agreement, lease contract, or permit from the DENR.

Section 3B.06. *Silvicultural and harvesting systems.* In any logging operations in production forests within forest lands, the proper silvicultural and harvesting systems that will promote optimum sustained yield shall be practiced, including but not limited to, the following:

- a) For dipterocarp forest, selective logging shall be practiced.
- b) For pine forest, the seed tree system with planting when necessary shall be practiced.
- c) For other types of forest, the silvicultural and harvesting system that will be found suitable by research shall be applied..

Article C. Reforestation Policies

Section 3C.01. *Mandates.* Pursuant to the provisions of Sec. 17, RA 7160 and subject to the rules and regulations promulgated by the DENR thru the Forest Management Bureau, all cities, municipalities within this province are hereby mandated to include in their respective programs of government the reforestation of the following:

- a) Bare or grass-covered tracts of forest lands with less than fifty per cent (50%) slope, but with soil so highly erodible as to make grass cover inadequate for soil erosion control;
- b) Brushlands or tracts of forest lands generally covered with brush, which need to be developed to increase their productivity;
- c) Open tracts of forest lands with slopes or gradients generally exceeding fifty per cent (50%), interspersed with patches of forest each of which is less than two hundred fifty (250) hectares in area;

- d) Denuded or inadequately-timbered areas proclaimed by the President as forest reserves and reservations as critical watersheds, national parks, game refuge, bird sanctuaries, national shrines, national historic sites;
- e) Inadequately-stocked forest lands within forest concessions;
- f) Portions of areas covered by pasture leases or permits having a slope of at least fifty per cent (50%); and
- g) River banks, easements, road rights-of-ways, deltas, swamps, former river beds, and beaches.

For tree planting projects:

- a) River banks, easements, road rights-of-ways, deltas, swamps, former river beds, and beaches.
- b) Residual forest areas;
- c) Appropriate areas on either side of a river or stream,
- d) Appropriate areas surrounding a landmark, shrine, or places of historical significance;
- e) Areas with high biodiversity
- f) Areas or slopes which are prone to erosion; and
- g) Open spaces, including appropriate residential or commercial areas, street islands, promenades, parking areas, and suitable sidewalk areas.

Article D. Conservation and Protection of Natural Resources

Section 3D.01. Regulated Acts.

- 1) No person, natural or juridical, shall appropriate, cut, utilize, any kind of timber inside alienable and disposable lands, private lands, civil reservations, and all lands containing standing or felled timber, including those under the jurisdiction of other government agencies, and the establishment and operation of sawmills and other wood-processing plants, without a duly executed license agreement, license, lease or permit from the DENR thru the Forest Management Bureau and a Mayor's Permit from the (City/Municipal) Mayor concerned.
- 2) No person, natural or juridical, shall smuggle any kind of natural resources products, including but not limited to, the following:
 - a] logs, timber and other forest products;
 - b] endangered species of flora and fauna, as classified to be such by the DENR;
 - c] endangered species of fishes and other aquatic resources as classified to be such by the DENR.

Article E. Protected Areas

Section 3E.01. *Prohibited Acts.* Except as may be allowed by the nature of their categories and pursuant to rules and regulations governing the same, the following acts are prohibited within “protected areas” as designated by the DENR under the provisions of RA 7586 otherwise known as the "National Integrated Protected Areas System Act of 1992.", viz:

- (a) Hunting, destroying, disturbing, or mere possession of any plants or animals or products derived therefrom without a permit from the Protected Area Management Board under the DENR;
- (b) Dumping of any waste products detrimental to the protected area, or to the plants and animals or inhabitants therein;
- (c) Use of any motorized equipment without a permit from the Protected Area Management Board;
- (d) Mutilating, defacing or destroying objects of natural beauty or objects of interest to cultural communities (of scenic value);
- (e) Damaging and leaving roads and trails in a damaged condition;
- (f) Squatting, mineral locating, or otherwise occupying any land;
- (g) Constructing or maintaining any kind of structure, fences or enclosures, conducting any business enterprise without a permit;
- (h) Leaving in exposed or unsanitary conditions refuse or debris, or depositing in ground or in bodies of water; and
- (i) Altering, removing destroying or defacing boundary marks or signs.

Article F. Administrative Provisions

Section 3F.01. *Issuance of Implementing Guidelines.* The Provincial Governor, or his duly authorized representative, in coordination with the Department of Environment and Natural Resources (DENR) thru the Forest Management Bureau shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 3F.02. *Penalty.* Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER IV
ENVIRONMENTAL POLLUTION PREVENTION AND CONTROL**

Article A. Air Pollution

Section 4A.01. *Declaration of Policy.* It is hereby declared as the policy of the provincial government the following:

- a) formulate a comprehensive provincial program of air pollution management that shall be implemented by the government through proper delegation and effective coordination of functions and activities;

- b) to encourage cooperation and self-regulation among citizens and industries through the application of market-based instruments;
- c) to give more emphasis on pollution prevention rather than on control and provide for a comprehensive management program for air pollution;
- d) to promote public information on the “Clean Air Act of 1999” and to encourage the participation of the public on air quality planning and monitoring;

Section 4A.02. Definition of Technical Terms. As used in this Article the following technical terms shall mean as defined herein:

Act - refers to Republic Act No. 8749, otherwise known as the “Philippine Clean Air Act of 1999”.

Air pollutant - means any matter found in the atmosphere other than oxygen, nitrogen, water vapor, carbon dioxide, and the inert gases all in their natural or normal concentrations, that is detrimental to health or the environment, which includes but not limited to smoke, dust, soot, cinder, fly ash, solid particles of any kind, gases, fumes, chemical mists, contaminated steam and radioactive substances.

Air pollution - means any alteration of the physical, chemical and biological properties of the atmosphere, or any discharge thereto of any liquid, gaseous or solid substances that will or is likely to create or to render the air resources of the country harmful, detrimental, or injurious to public health, safety or welfare or which will adversely affect their utilization for domestic, commercial, industrial, agricultural, recreational, or other legitimate purposes.

Air quality performance rating - refers to a rating system to be developed by the Department through the Bureau. The air quality performance ratings will be grouped by industry, and will compare emissions data for industrial sources to the relevant National Ambient Air Quality Standards and the relevant National Emissions Standards for Source Specific Air Pollutants.

Airshed- refers to areas with common weather or meteorological conditions and sources of air pollution which affect the interchange and diffusion of pollution in the surrounding atmosphere.

Ambient air quality - refers to the atmosphere’s average purity in a broad area as distinguished from discharge measurements taken at the source of pollution or the present characteristic or nature of the surrounding atmosphere.

Ambient air quality guideline values - refers to the concentration of air over specified periods classified as short-term and/or long-term which are intended to serve as goals or objectives for the protection of health and/or public welfare. These values shall be used for air quality management purposes such as determining time trends, evaluating stages of deterioration or enhancement of the air quality. In general, used as a basis for taking positive action in preventing, controlling, or abating health impacts from air pollution.

Ambient air quality standard - means the concentration of an air pollutant which, in order to protect public health and/or public welfare, shall not be exceeded in the breathing zone, at any time. Standards are enforceable and must be complied with by the owner or person in-charge of an industrial operation, process or trade.

Authority to Construct - refers to the legal authorization granted by the Bureau to install a new source or modify an existing source.

Best Available Control Technology - refers to approaches, techniques or equipment which when used, result in lower air emissions but in a cost-effective manner. BACT results in lower emission rates than those specified in the National Emission Standards for Source Specific Air Pollutants.

Bio-medical waste - refers to pathological wastes, pharmaceutical wastes, chemical wastes and sharps defined as follows.

Pathological wastes - include all human tissue (whether infected or not) such as limbs, organs, fetuses and body fluid; animal carcasses and tissue, together with all related swabs and dressings.

Pharmaceutical wastes - include pharmaceutical products; drugs and chemicals that have been returned from wards; have been spilled or soiled; are expired or contaminated; or are to be discarded for any reason.

Chemical wastes - include discarded solid, liquid or gaseous chemicals from laboratories or other sources such as diagnostic work, environmental work, cleaning, housekeeping and disinfecting procedures.

Sharps - include needles, syringes, scalpels, blades and any other items that could cut or puncture.

Cease and Desist Order - refers to the *ex parte* Order directing the discontinuance of the operation resulting in the emission or discharge of pollutants exceeding the emission standards or whenever such emission or discharge constitutes imminent threat to human, animal or plant life, public health or public safety. Non-compliance with an undertaking or agreement submitted to the Department shall likewise be a ground for issuance of a CDO.

Certificate of Compliance to Emission Standard - refers to a certificate issued by DOTC to a rebuilt vehicle(s) or second hand vehicle(s) imported into the country based on an inspection by the DOTC MVIS in accordance with the emission standards of these Implementing Rules and Regulations, and as a requirement for initial registration of the subject vehicle(s).

Certificate of Conformity - refers to the certificate issued by the Department to a vehicle manufacturer/assembler or importer certifying that a particular new vehicle or vehicle type meets the requirements provided under this Act and its Implementing Rules and Regulations.

Certificate of Emission Compliance - refers to a certificate issued by the DOTC or its authorized emission testing center(s) for a vehicle apprehended during roadside inspection, certifying that the particular vehicle meets the emission requirements of these Implementing Rules and Regulations, and which shall have no validity period.

Completely Built-up Unit (CBU) - refers to vehicles imported into the country either brand new or used and ready for operation.

Compliance Plan - refers to a plan submitted to the Bureau for approval which details how an existing stationary air emissions source will be brought into compliance. The

owner of the facility must submit the plan within two months of notification of non-compliance by the Bureau. The plan must include a schedule that will be enforceable.

Compression Ignition Engine - means an internal combustion engine in which atomized fuel temperature is raised through compression, resulting in ignition, e.g. diesel engines.

Completely Knocked-Down (CKD) - refers to new parts and components and/or engines that are imported in disassembled condition for purposes of assembly. It may include not only parts and components but also sub-assemblies and assemblies, e.g. engines, transmissions, axle assemblies, chassis and body assemblies.

Conformity of Production - refers to the verification of the production units' conformity with the requirements of the Clean Air Act and these Implementing Rules and Regulations.

Continuous Emission Monitoring System - means the total equipment, required under these Implementing Rules and Regulations or as directed by the Bureau, used to sample and condition (if applicable), analyze, and provide a permanent record of emissions or process parameters. Such record shall be the basis of the firm's compliance with the emission standards. Further, it may be an approved monitoring system for continuously measuring the emission of a pollutant from an affected source or facility and as such, may be used in computing annual emission fees.

Criteria Pollutants - are air pollutants for which National Ambient Air Quality Guideline Values have been established.

Detoxification process - refers to the process of diminishing or removing the poisonous quality of any substance using chelating agents to prevent or reverse toxicity particularly for those substances (e.g., heavy metals) that are cumulative or persistent in the body.

Eco-profile - shall refer to the geographic-based instrument for planners and decision-makers which presents an evaluation of the environmental quality and carrying capacity of an area. It is the result of the integration of various primary and secondary data and information on natural resources and anthropogenic activities on the land which are evaluated by various environmental risk assessment and forecasting methodologies.

Emission - means any measurable air contaminant, pollutant, gas stream or unwanted sound from a known source which is passed into the atmosphere.

Emission averaging - is a technique whereby a facility having more than one source of a given pollutant may, under certain circumstances and with Bureau approval, reduce emissions from one or more sources sufficiently so that the average of all the facility's source emissions is equal to or below the applicable standard for a particular pollutant. Emission averaging is computed on an annual potential ton per year basis.

Emission Charge - refers to a fee corresponding to the quality, quantity, volume and toxicity of emissions from an industrial or mobile source.

Emission Credits - are generated by sources that reduce their annual mass emissions below the equivalent minimum regulatory level by either installing and operating pollution control devices or by using other Bureau approved methods. The equivalent minimum regulatory level is based upon the lowest annual emissions in tons that results when the source operates at its permitted emission rate for its typical annual operating hours. Sources that are subject to different allowable emission rates, such as National Emission Standards and Ambient Air Quality Standards, must estimate the minimum

regulatory level on the standard that provides the lowest annual allowable tonnage. An emission credit is equal to one ton of an air pollutant.

Emission factor - refers to a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. Emission factors may be used to calculate emission fees, as indicated in Rule XVI, Section 5. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant (e. g., kilograms of particulate emitted per megagram of coal burned). Such factors facilitate estimation of emissions from various sources of air pollution. In most cases, these factors are simply averages of all available data of acceptable quality. The general equation for emission estimation is: $E = A \times EF \times (1 - ER/100)$ where: E = emissions; A = activity rate; EF = emission factor; and ER = overall emission reduction efficiency. %ER is further defined as the product of the control device destruction or removal efficiency and the capture efficiency of the control system. When estimating emissions for a long time period (e. g., one year), both the device and the capture efficiency terms should account for upset periods as well as routine operations.

Emission offset - refers to an emission reduction credit that compensates for an emission increase of an affected pollutant from a new or modified source.

Emissions Trading - refers to a market-based approach to air pollution control which allows for transferring emission credits between different facilities for use as a form of regulatory compliance.

Environmental Management Systems - that part of the overall, management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.

Environmental Management Plan/Program - this is the plan or program for achieving the environmental objectives and targets of a project or undertaking. It includes the designation of responsibility for achieving objectives and targets and the means and time-frame by which they are to be achieved. It details the prevention, mitigation, compensation, contingency and monitoring measures to enhance positive impacts and minimize negative impacts of a project or undertaking.

Environmental Management Systems Audit - a systematic and documented verification process of objectively obtaining and evaluating evidence to determine whether an organization's EMS conforms to the EMS audit criteria set by the organization and for communication of the results of this process to management.

Episode - means a series of short-term air pollution events that significantly alter the ambient air quality of an affected area.

Equivalent Method - refers to any technique or procedure for sampling and/or analyzing an air pollutant which has been approved by the Bureau and demonstrated to have a consistent and quantitatively known relationship with the designated standard method.

Existing Source - means any source already erected, installed, and in operation; or any source for which construction has been offered for bidding or actual construction has commenced.

Governing Board - refers to a multi-sectoral body created under Section 9 of RA 8749 to effectively carry out and implement the air quality action plan of an airshed.

Greenhouse gases - refers to those gases such as carbon dioxide, methane, and oxides of nitrogen, chlorofluoro-carbons, and the others that can potentially or can reasonably be expected to induce global warming.

Gross Vehicle Mass or Weight - means the sum of the vehicle mass or weight and the allowable maximum payload as declared by the vehicle manufacturer.

Guideline - means an official recommendation or guidance on the protection of human beings or receptors in the environment from the adverse effects of air pollutants.

Hazardous substances - refers to those substances which present either: (1) short-term acute hazards such as acute toxicity by ingestion, inhalation, or skin absorption, corrosivity or other skin or eye contact hazard or the risk of fire explosion; or (2) long-term toxicity upon repeated exposure, including carcinogenicity (which in some cases may result in acute exposure but with a long latent period), resistance to the detoxification process, or the potential to pollute underground or surface waters, whether shipped into the country or generated locally.

Hazardous wastes - are hazardous substances that are without any safe commercial, industrial, agricultural or economic usage and are shipped, transported or brought from the country of origin for dumping or disposal into or in transit through any part of the territory of the Philippines. Hazardous wastes shall also refer to hazardous substances that are by-products, side-products, process residues, spent reaction media, contaminated plant or equipment or other substances from manufacturing operations, and as consumer discards of manufactured products.

Imported Used/Second-Hand Vehicle - means any used or second-hand motor vehicle imported and registered in the country of origin.

Incineration - means the burning of municipal, bio-medical and hazardous wastes which process emits toxic and poisonous fumes.

Infectious waste - refers to soiled surgical dressings, swabs and other contaminated waste from treatment areas; materials which have been in contact with persons or animals suffering from infectious diseases; cultures and stocks of infectious agents from laboratory work; dialysis equipment; apparatus and disposable gowns, aprons, gloves, towels, etc; waste from dialysis treatment area; waste from patients in isolation wards; all materials which may contain pathogens in sufficient concentration or quality that exposure to could result in disease.

Installation - means any structure, equipment, facility or appurtenances thereto, operation of which may be a source of pollution or a means to control the same.

In-Use Vehicle - means a motor vehicle duly registered with the LTO.

Light Duty Vehicles - are motor vehicles whose gross vehicle weight is equal to or less than 3,500 kgs, in accordance with the definition contained in Philippine National Standards (PNS) 1891. This also refers to "Light Commercial Vehicles".

Lowest Achievable Emission Rate - refers to any technology or combination of technologies and process controls that result in the lowest possible emissions of a given air pollutant. Cost is not a consideration in determining applicable LAER for a given source; however, technical feasibility is. The technology must be reasonably demonstrated to be appropriate and reliable for each application.

Mandatory Inspection - refers to the interval between testing and the tests performed, as partial pre-condition for the renewal of registration of in-use motor vehicles.

Manufacturer or Assembler - means any entity or person who manufactures or assembles motor vehicles, for eventual use in the Philippines.

Medical waste - means any solid waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals.

Medium/Heavy Duty Vehicles - refers to motor vehicles whose gross vehicle weight is greater than 3,500 kgs, in accordance with the definition contained in PNS 1891.

Mobile source - means any vehicle/machine propelled by or through oxidation or reduction reactions, including combustion of carbon-based or other fuel, constructed and operated principally for the conveyance of persons or the transportation of property or goods, that emit air pollutants as a reaction product.

Modification - means any physical change or alteration in the method of operation of an existing source which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that source, or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously permitted. The following are exempted from the said definition.

Routine maintenance, repair and replacement shall not be considered physical changes if not intended to extend the useful life beyond the equipment manufacturer's design.

An increase in the production rate provided the facility is permitted to operate at the increased level and such increase does not exceed the designed capacity of the existing source; and

An increase in hours of operation provided that the facility is permitted to operate for the increase in hours.

Motorcycle - refers to any two-wheeled motor vehicle with at least one headlight, taillight and stoplight, and one or more saddle seats. For purposes of these rules, motorcycles shall include motorcycles with attached cars also known as "tricycles".

Motor Vehicle - means any vehicle propelled by a gasoline or diesel engine or by any means other than human or animal power constructed and operated principally for the conveyance of persons or the transportation of goods.

Motor Vehicle Registration - refers to the official recording of a motor vehicle by the Land Transportation Office (LTO) subject to the conformance of the vehicle to the safety and emission standards provided under Section 21 of the Act, including the pre-evaluation of the documents/requirements pursuant to Section 5 of Republic Act 4136, as amended, otherwise known as the Land Transportation Code.

National Ambient Air Quality Guideline Values - are limits on criteria air pollutant concentrations published by the DENR, intended for the protection of public health, safety, and general welfare.

National Motor Vehicle Inspection and Maintenance Program - refers to the set of projects and other activities and efforts all designed to reduce the damaging impact of air pollution and unsafe vehicles on health and safety of the people, through adoption of standards for emission and vehicle safety, and a series of measures to ensure compliance with them.

New Motor Vehicle - means a vehicle constructed entirely from new parts that has never been sold or registered with the DOTC or with the appropriate agency or authority, and operated on the highways of the Philippines, any foreign state or country.

New Source - means any plant, equipment, or installation in any trade, business or establishment which generates, emits or disposes air emissions into the atmosphere. This includes any existing stationary source transferred or moved to a different location or site for the purpose of installation, operation or use after such date.

Normal Cubic Meter (Ncm) - means the volume of dry gas which occupies a cubic meter measured at twenty five degrees Celsius (25°) at an absolute pressure equivalent to seven hundred sixty (760) mm Hg.

Octane Rating or the Anti-Knock Index (AKI) - means the rating of the anti-knock characteristics of a grade or type of automotive gasoline as determined by dividing by two (2) the sum of the Research Octane Number (RON), plus the Motor Octane Number (MON). The octane requirement, with respect to automotive gasoline for use in a motor vehicle or a class thereof, whether imported, manufactured, or assembled by a manufacturer, refers to the minimum octane rating or such automotive gasoline which such manufacturer recommends for the efficient operation of such motor vehicle, or substantial portion of such class, without knocking.

Opacity - means the amount of light obscured by particle pollution in the atmosphere.

Operator - means a person or entity that manages a transport business but not necessarily a vehicle owner.

Owner - means the person or entity identified as the motor vehicle owner in the motor vehicle registration or by a valid deed of sale.

Ozone Depleting Substances (ODS) - refers to those substances that significantly deplete or otherwise modify the ozone layer in a manner that is likely to result in adverse effects on human health and the environment such as, but not limited to, chlorofluorocarbons, halons, and the like.

Particulate Matter or Suspended Particulates - means any material, other than uncombined water, which exists in a finely divided form as a liquid or solid.

Passenger Car - refers to a four-wheeled motor vehicle used for the carriage of not more than six passengers including the driver and having a gross vehicle mass not exceeding 2,500 kg in accordance with the definition contained in PNS 1891.

Permit - refers to the legal authorization to engage in or conduct any construction, operation, modification or expansion of any installation, operation or activity which will be reasonably expected to be a source of pollution.

Permitee - refers to the owner, operator or entity who owns, leases, operates, controls or supervises any source, facility, machine or equipment.

Permit to Operate - refers to the legal authorization granted by the Bureau to operate or maintain any installation for a specified period of time.

Permit Condition - refers to a statement or stipulation issued with a permit, compliance with which is necessary for continued validity of the permit.

Persistent Organic Pollutants (POPs) - means organic compounds that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to human health and the environment. These compounds resist photolytic, chemical and biological degradation, and include but are not limited to dioxin, furan, Polychlorinated Biphenyls (PCBs), organochlorine pesticides, such as aldrin, dieldrin, DDT, hexachlorobenzene, lindane, toxaphene and chlordane.

Poisonous and toxic fumes - means any emission and fumes which do not conform to internationally-accepted standards, including but not limited to, World Health Organization (WHO) guideline values.

Pollution control device - refers to any device or apparatus that is used to prevent, control, or abate the pollution of air caused by emissions from identified sources at levels within the air pollution standards established by the Department.

Pollution control technology - refers to pollution control devices, production processes, fuel combustion processes or other means that effectively prevent or reduce emissions or effluents.

Potential to emit - refers to the annual mass emissions that would result from a source when operating 8,760 hours per year. Actual emissions are based on the actual hours of operation per year.

Rebuilt Motor Vehicle - means a locally assembled vehicle using new or used engine, major parts or components.

Reference Mass or Weight - means the mass or weight of the vehicle in running order with a full fuel tank and including the set of tools and spare wheel, plus 100 kilograms but does not include the mass or weight of the passengers and driver.

Ringelmann Chart - means the chart described in the U.S. Bureau of Mines, Information Circular No. 8333 and No. 7718, and used for measuring smoke opacity.

“Siga” - means the traditional small scale method of burning of wastes resulting from cleaning the backyard such as fallen leaves, twigs, stems, and other similar matter from plants and trees in the backyard where the burning is done.

Smoke Opacity Meter (or Opacimeter) - means an instrument which determines the smoke opacity in exhaust gases emitted by the engine system.

Spark-Ignition Engine - means an internal combustion engine in which the air/fuel mixture is ignited by a spark plug, e.g., a gasoline engine.

Standard of performance - means a standard for emission of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction, taking into account the cost of achieving such reduction and any non-air quality health and environment impact and energy requirement as determined by the Department through the Bureau.

Stationary source - refers to any building or fixed structure, facility or installation that emits or may emit any air pollutant.

Type Approval - refers to the official ratification of the compliance of a vehicle type with applicable national or international regulations.

Useful Life of Vehicles and Engines - refers to the period of time a vehicle and/or engine can be used, and meet standards of road worthiness and engine emissions.

Vehicle Type - means a category of power-driven vehicles which do not differ in such essentials as reference mass or weight, engine type, number of cylinders, body configuration, manner of transmission, fuel used and similar characteristics.

Section 4A.03. Prohibited Acts.

- (1) **Fugitive Particulates.** No person, natural or juridical, shall cause, let, permit, suffer or allow the emission of particulate matter from any source whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alternation, demolition or wrecking or industry related activities such as loading, storing or “handling,” without taking reasonable precautions to prevent such emission. Such reasonable precaution shall include, but not be limited to, the following:
 - a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structure, construction, operations, the grinding of rock, quarry or clearing of lands.
 - b) Application of asphalt, oil water, or suitable chemicals on roads, materials stockpiles, and other surface which create airborne dust problem; and
 - c) Installation and use of hoods fans and fabric filters or other suitable control devices to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
- (2) **Volatile Organic Compounds or Organic Solvent Emissions.** No person shall store, pump, handle, process, unload or use in any process or installation, volatile compound or organic solvents without applying known existing vapor emission control devices or systems deemed necessary and approved by the DENR.
- (3) **Nuisance.** No person shall discharge from any source whatsoever such quantities of air contaminants or other material which constitute nuisance as defined under Articles 694 to 707 of Republic Act No. 385, otherwise known as the Civil Code of the Philippines.
- (4) **Open Burning.** No person shall burn any materials in any quantities which shall cause the emission of toxic and poisonous fumes. Such materials include but are not limited to plastic, polyvinyl chloride, paints, ink, wastes containing heavy metals, organic chemicals, petroleum related compound, industrial wastes, ozone depleting substances and other similar toxic and hazardous substances.
- (5) No establishment, firm, company, government or private entity or organizations shall burn or cause open burning of waste materials in their premises, area of jurisdiction, including recognized or unrecognized dumpsites in any quality or quantity.

- (6) No industrial plant or source shall operate at capacities which exceed the limits of operation or capability of a control device to maintain the air emission within the standard limitations imposed by the Act or by relevant permit conditions issued by the DENR.
- (7) No person shall build, erect, construct, install, or implant any new source, or operate, modify, or rebuild an existing source, or by any other means release or take action which would result in, together with the concentrations of existing air pollutants, ambient air concentration greater than the ambient air quality standards specified in Section 12 (b) of the Act
- (8) No person shall build, erect install or use any article, machine, equipment or other contrivance, the use of which will conceal an emission which would otherwise constitute a violation of any of the provisions of these Implementing Rules and Regulations.
- (9) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant.
- (10) All pollution control devices and systems shall be properly and consistently maintained and correctly operated. No facilities shall be operated without the control equipment in proper operation, except with the permission of the DENR when special circumstances arise.
- (11) No person, natural or juridical, shall throw, run, drain, or otherwise dispose into any of the water, air and/or land resources of this province, or cause, permit, suffer to be thrown, run, drain, allow to seep or otherwise dispose thereto any organic or inorganic matter or any substance in gaseous or liquid form that shall cause pollution thereof.
- (12) No person, natural or juridical, shall perform any of the following activities without first securing a permit from the National Pollution Control Commission for the discharge of all industrial wastes and other wastes which could cause pollution:
 - a) the construction, installation, modification or operation of any sewage works or any extension or addition thereto;
 - b) the increase in volume or strength of any wastes in excess of the permissive discharge specified under any existing permit;
 - c) the construction, installation or operation of any industrial or commercial establishments or any extension or modification thereof or addition thereto, the operation of which would cause an increase in the discharge of waste directly into the water, air and/or land resources of the Philippines or would otherwise alter their physical, chemical or biological properties in any manner not already lawfully authorized.

Section 4A.04. Ban on Incineration. Incineration, hereby defined as the burning of bio-medical and hazardous wastes, which process emits poisonous and toxic fumes, is hereby prohibited; Provided, however, that the prohibition shall not apply to traditional small-scale method of community/neighborhood sanitation “siga”, traditional agricultural, cultural, health, and food preparation and crematoria; Provided further, that existing incinerators dealing with bio-medical wastes shall be phased out within three (3) years after the effectivity of this Code.

Article B. Pollution from Motor Vehicle Emission

Section 4B.01. Regulated Acts. No person, natural or juridical, shall manufacture, assemble or import from outside this province, new motor vehicles as classified under PNS 1891 without a Certificate of Conformity (COC) from the DENR as required under Rule XXX, Art. XIX, Adm. Order No. 2000-81 (IRR of RA 8749).

Section 4B.02. Exemption. Those motor vehicle types already covered by the COC at the time of the effectivity of RA 8749 are exempted from the provision of this Article unless the DENR finds justifiable reason to suspend, cancel or revoke such certificate of conformity (COC).

Section 4B.03. Rules and Regulations.

- 1) It shall be unlawful for any owner or operator of a motor vehicle to allow it to discharge air pollutants at level greater than the acceptable pollutant concentration standards prescribed by the National Pollution Control Commission with respect to the class of motor vehicles to which said motor vehicle belongs.
- 2) The owner or operator of a motor vehicle shall not use his vehicle or cause or allow it to be used unless such motor vehicle meets the established emission standards.
- 3) No imported or locally manufactured motor vehicle shall be sold, registered or operated unless it meets the established emission standards as certified by the National Pollution Control Commission.
- 4) Any vehicle suspected of violation of emission standards through visual signs, such as, but not limited to smoke-belching, shall be subjected to an emission test by a duly authorized emission testing center established by the DENR. Should it be shown that there was no violation of emission standards, the vehicle shall be immediately released. Otherwise, a testing result indicating an exceedance of emission standards would warrant the continuing custody of the impounded vehicle unless the appropriate penalties are fully paid, and the license plate is surrendered to the DOTC pending the fulfillment of the undertaking by the owner/operator of the motor vehicle to make the necessary repairs so as to comply with the standards. For this purpose, a corresponding pass or temporary permit to use the vehicle may be issued by the DOTC thru the LTO to authorize the use of the motor vehicle within a specified period that shall not exceed seven (7) days for the sole purpose of making the necessary repairs on the said vehicle. The owner/operator of the vehicle shall correct its defects and show proof of compliance to the appropriate pollution control officer before the vehicle can be allowed to be driven on any public roads.

In addition, the driver and the operator of the apprehended vehicle shall undergo a seminar on pollution control and management conducted by the concerned government agency and shall also suffer the corresponding penalties prescribed under DENR Adm. Order No. 2000-81.

Section 4B.04. Procedure for Apprehension. Pursuant to Section 46 of RA 8749, the procedure for apprehension and impounding of motor vehicles which emit pollutants beyond the allowable limits shall be as follows:

- a) A vehicle suspected of violation of emission standards through visual signs shall be flagged down by the apprehending officer.

- b) The apprehending officer shall conduct an emission test of the vehicle using portable emission testing equipment and using test procedures to determine whether the vehicle complies with the emission standards. Should the results show an exceedance of the emission limits, the computerized print-out, or other test result generated by the portable emission testing equipment shall serve as prima facie evidence of violation of the emission standards.
- c) Should the test result show that there is an exceedance of the standards, a ticket will be issued to the driver and a warrant of constructive or actual distraint to any owner of the motor vehicle as provided for in Republic Act 4136 shall commence unless the vehicle has been previously found violating the standards three (3) or more times within the last 365-day period. In the latter case, the motor vehicle registration shall be suspended for a period of one (1) year.
- d) Upon payment of the fine at the DOTC through LTO or DOTC- designated enforcement unit(s) or deputized agency or private entity, the vehicle plate(s) will be surrendered to the apprehending officer and the driver will be issued a temporary pass allowing him to take possession of the vehicle for the purpose of undertaking the needed repairs within a period not later than seven (7) days from the date the vehicle is temporarily released.
- e) Motor vehicles released for purposes of repairs shall not be operated or used in public roads except for the purpose of transporting the same to the service center for repairs and to the authorized emission testing center for emission testing.
- f) When the repairs are made, the vehicle must undergo an emission test at a DOTC/LTO testing center or its authorized and accredited emission testing center to ascertain if it already meets the emission standards.
- g) Once the vehicle meets the standards, the DOTC/LTO testing center or its authorized and accredited emission testing center shall issue a Certificate of Emission Compliance to the driver of the vehicle. The CEC will have no validity period, its sole purpose is to secure the release of the impounded vehicle or the vehicle license plates, whichever is applicable and which were confiscated as a consequence of that specific violation.
- h) Upon presentation of the Certificate of Emission Compliance, the driver shall recover his vehicle or his vehicle plates, whichever is applicable, from the DOTC through LTO and/or DOTC- designated enforcement unit(s) which has custody over the vehicle or vehicle plates.

In the event the driver of the apprehended vehicle contests the fine imposed and/or the violation of emission standards, he may appeal the same with the DOTC- designated Traffic Adjudication Service where he will be given the opportunity to be heard.

Article C. Administrative Provisions

Section 4C.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the Department of Environment and Natural Resources (DENR) and the DOTC/LTO shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 4C.02. Penalty. Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER V
PROTECTION AND CONSERVATION OF WILDLIFE RESOURCES**

Article A. Policy and Objectives

Section 5A.01. Declaration of Policy. It is hereby declared as a policy of the provincial government to conserve the province's wildlife resources and their habitats for sustainability.

Section 5A.02. Objectives. In the pursuit of the above-mentioned policy this Chapter shall have the following objectives:

- a) to conserve and protect wildlife species and their habitats to promote ecological balance and enhance biological diversity;
- b) to regulate the collection and trade of wildlife.
- c) to pursue with due regard to the national interest, the Philip-pine commitment to international conventions, protection of wildlife and their habitats; and
- d) to initiate or support scientific studies on the conservation of biological diversity.

Section 5A.03. Definition of Terms. As used in this Article, the term

Bioprospecting - means the research, collection and utilization of biological and genetic resources for purposes of applying the knowledge derived therefrom solely for commercial purpose;

By product or derivatives - means any part taken or substance extracted from wildlife in raw or in processed form. This includes stuffed animals and herbarium specimens;

Captive-breeding/culture or propagation - means the process of producing individuals under controlled conditions or with human interventions;

Collection or collecting - the act of gathering or harvesting wildlife, its by-products or derivatives;

Critically endangered species - refer to a species or subspecies that is facing extremely high risk of extinction in the wild in the immediate future;

Conservation - means preservation and sustainable utilization of wildlife, and/or maintenance, restoration and enhancement of the habitat;

Economically important species - species which have actual or potential value in trade or utilization for commercial purposes;

Endangered species - refers to species or subspecies that is not critically endangered but whose survival in the wild is unlikely if the casual factors continue operating;

Endemic species - means species or subspecies which is naturally occurring and found only within specific areas in the country.

Exotic species - means species or subspecies which do not naturally occur in the country;

Export permit - refers to a permit authorizing an individual to bring out wildlife from the Philippines to any other country;

Gratuitous permit - means permit issued to any individual or entity engaged in noncommercial scientific educational undertaking to collect wildlife.

Habitat - means a place or environment where species or subspecies naturally occur or has naturally established its population.

Import permit - refers to a permit authorizing an individual to bring in wildlife from another country;

Indigenous wildlife - means species or subspecies of wildlife naturally occurring or has naturally established population in the country;

Introduction - means bringing species into the wild that is outside its natural habitat;

Re-export permit - refers to a permit authorizing an individual to bring out of the country a previously imported wildlife;

Threatened Species - a general term to denote species or subspecies considered as critically endangered, endangered, vulnerable or other accepted categories of wildlife whose population is at risk of extinction;

Trade - means the act of engaging in the exchange, exportation or importation, purchase or sale of wildlife, their derivatives or the by-products, locally or internationally;

Traditional use - means utilization of wildlife by indigenous people in accordance with written or unwritten rules, usage, customs and practices traditionally observed, accepted and recognized by them;

Transport permit - means a permit issued authorizing an individual to bring wildlife from one place to another within the territorial jurisdiction of the Philippines;

Vulnerable species - refers to species or subspecies that is not critically endangered but is under threat from adverse factors throughout their range and is likely to move to the endangered category in the near future;

Wildlife - means wild forms and varieties of flora and fauna, in all developmental stages, including those which are in captivity or are being bred or propagated;

Wildlife collector's permit - means a permit to take or collect from the wild certain species and quantities of wildlife for commercial purpose; and

Wildlife farm/culture permit - means a permit to develop, operate and maintain a wildlife breeding farm for conservation, trade and/or scientific purposes.

Article B. Protection and Conservation of Wildlife Resources

Section 5B.01. Prohibited Acts. Unless otherwise allowed or permitted by the DENR in accordance with the provisions of R.A. 9147 (Wildlife Act), it shall be unlawful for any person to willfully and knowingly exploit wildlife resources and their habitat, or undertake the following acts:

- a) killing and destroying wildlife species, except in the following instances;

- 1) when it is done as part of the religious rituals of established tribal groups or indigenous cultural communities;
 - 2) when the wildlife is afflicted with an incurable communicable disease;
 - 3) when it is deemed necessary to put an end to the misery suffered by the wildlife;
 - 4) when it is done to prevent an imminent danger to the life or limb of a human being; and
 - 5) when the wildlife is killed or destroyed after it has been used in authorized research or experiments
- b) inflicting injury which cripples and/or impairs the reproductive system of wildlife species;
- c) effecting any of the following acts in critical habitat(s);
- 1) dumping of waste products detrimental to wildlife;
 - 2) squatting or otherwise occupying any portion of the critical habitat;
 - 3) mineral exploration and/or extraction;
 - 4) burning;
 - 5) logging; and
 - 6) quarrying
- d) introduction, reintroduction or restocking of wildlife resources;
- e) trading of wildlife;
- f) collecting, hunting or possessing wildlife, their by-products and derivatives;
- g) gathering or destroying of active nests, nest trees, host plants and the like;
- h) maltreating and/or inflicting other injuries not covered by the preceding paragraph; and
- i) transporting of wildlife.

Section 5B.02. Commercial Breeding or Propagation of Wildlife Resources. No person, natural or juridical, shall undertake breeding or propagation of wildlife for commercial purposes without first securing a permit therefor from the (city/municipal) mayor concerned in addition to the requirements being imposed by the DENR. Provided, that only progenies of wildlife raised, as well as unproductive parent stock shall be utilized for trade:

Section 5B.03. Possession of Wildlife. No person, natural or juridical, shall possess any kind of wildlife unless such person or entity can prove financial and technical capability and facility to maintain said wildlife: *Provided*, That the wildlife was not obtained in violation of the

provision of RA 9147 and the wildlife has been registered with the Office of the Mayor concerned for regulatory purposes.

Article C. Ban on the Hunting of Birds and Animals

Section 5C.01. Prohibited Acts. It is hereby declared unlawful for any person to hunt or catch any kind of birds or animals by whatever means, or take, gather, collect or harvest any kind of flora or plants within the jurisdiction of this province including, but not limited to, the following:

1. All flora and fauna listed under the protocols of the Convention on the International Trade of Endangered Species of Flora and Fauna (CITES)
2. Other species of flora and fauna that are unique or endemic in this province.

Article D. Ban on the Catching of Endangered Species of Fish, Shell, Mollusk and other Aquatic Resources

Section 5D.01. Prohibited Acts. It is hereby declared unlawful for any person to catch any kind of endangered species of fish, shell, mollusk and other aquatic resources in the city water or municipal water of this province.

Article E. Miscellaneous Provisions

Section 5E.01. Rules and Regulations

- 1) Collection of wildlife may be allowed, provided, that in the collection of wildlife, appropriate and acceptable wildlife collection techniques there would be no detrimental effects to the existing wildlife populations and their habitats. **Provided, further,** That collection of wildlife by indigenous people may be allowed for traditional use and not primarily for trade: **Provided furthermore,** That collection and utilization for said purpose shall not cover threatened species:
- 2) No person or entity shall possess any kind of wildlife unless such person or entity can prove financial and technical capability and facility to maintain said wildlife: **Provided,** That the wildlife was not obtained in violation of the provisions of RA 9147 and its implementing rules and regulations.
- 3) By-products and derivatives may be collected and/or possessed: **Provided,** That they are not obtained in violation of RA 9147 and its IRR;
- 4) Local transport of wildlife, by products and derivatives collected or possessed through any other means may be authorized provided that the same will not prejudice the wildlife and public health.
- 5) Wildlife species may be exported to or imported from another country provided that it has been authorized by the DENR thru its duly authorized representative and that the recipient of the wildlife is technically and financially capable to maintain it.
- 6) The introduction, reintroduction or restocking of endemic and indigenous wildlife shall be allowed only for population enhancement or recovery purposes subject to prior clearance from the DENR thru its duly authorized representative.

- 7) Any proposed introduction shall be subject to a scientific study which shall focus on the bio-ecology. The proponent shall also conduct public consultations with concerned individuals or entities.
- 8) No exotic species shall be introduced into this province, unless a clearance from the DENR thru its duly authorized representative is first obtained. In no case shall exotic species be introduced into protected areas covered by Republic Act No. 7586 and the critical habitats under Section 25 of RA 9147. .
- 9) In cases where introduction is allowed, it shall be subject to environmental impact study which shall focus on the bio-ecology, socioeconomic and related aspects of the area where the species will be introduced. The proponent shall also be required to secure the prior informed consent from the local stakeholders.
- 10) Bio-prospecting shall be allowed only upon execution of an undertaking by any proponent, stipulating therein its compliance with the commitment(s) to reasonable terms and conditions as required by the DENR which are necessary to protect biological diversity.

Provided, that the duly authorized representative of the DENR in consultation with the concerned agencies, before granting the necessary permit, shall require that prior informed consent be obtained by the applicant from the concerned indigenous cultural communities, local communities, management board under Republic Act o. 7586 or private individual or entity. The applicant shall disclose fully the intent and scoped of the bio-prospecting activity in a language and process understandable to the community. The prior informed consent from the indigenous peoples shall be obtained in accordance with existing laws. The action on the bio-prospecting proposal by concerned bodies shall be made within a reasonable period.

If the applicant is a foreign entity or individual, a local institution should be actively involved in the research, collection and, whenever applicable and appropriate, in the technological development of the products derived from biological and genetic resources.

- 11) Collection and utilization of biological resources for scientific research and not for commercial purpose shall be allowed only upon execution of an undertaking/agreement with the issuance of a gratuitous permit by the Secretary of the DENR or his duly authorized representative: **Provided**, That prior clearance from concerned bodies shall be secured before the issuance of the gratuitous permit.
- 12) All activities dealing on genetic engineering and pathogenic organisms in the Philippines, as well as activities requiring the importation, introduction, field release and breeding of organisms that are potentially harmful to man and the environment shall be reviewed in accordance with the bio-safety guidelines ensuring public welfare and the protection and conservation of wildlife and their habitats.
- 13) Whenever an economically important species become threatened, any form of collection is hereby prohibited except for scientific, educational or breeding/propagation purposes subject to the approval or clearance from the duly authorized representative of the DENR.
- 14) Conservation breeding or propagation of threatened species is hereby encouraged in order to enhance its population in its natural habitat. Provided, that it shall be done

simultaneously with the rehabilitation and/or protection of the habitat where the captive-bred or propagated species shall be released, reintroduced or restocked.

- 15) Commercial breeding or propagation of threatened species may be allowed provided that the following minimum requirements are met by the applicant, to wit:
 - a) Proven effective breeding and captive management techniques of the species; and
 - b) Commitment to undertake the commercial breeding in accordance with Section 17 of RA 9147, simultaneous with conservation breeding.

Article F. Administrative Provisions

Section 5F.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the Department of Environment and Natural Resources (DENR) shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 5F.02. Penalty. Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

CHAPTER VI PROTECTION OF THE ENVIRONMENT FROM TOXIC SUBSTANCES, HAZARDOUS AND NUCLEAR WASTES

Article A. Policy and Scope

Section 6A.01. Declaration of Policy. It is hereby declared as the policy of the provincial government to regulate, restrict or prohibit the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to health or the environment; to prohibit the entry, even in transit, of hazardous and nuclear wastes and their disposal into the territorial limits of this province for whatever purpose; and to provide advancement and facilitate research and studies on toxic chemicals.

Section 6A.02. Scope. This Article shall cover the importation, manufacture, processing, handling, storage, transportation, sale, distribution, use and disposal of all unregulated chemical substances and mixtures including the entry, even in transit as well as the keeping or storage and disposal of hazardous and nuclear wastes into this province, for whatever purposes.

Section 6A.03. Definition. As used in this Article, the term:

Chemical substance - means any organic or inorganic substance of a particular molecular identity, including:

- a) Any combination of such substances occurring in whole or in part as a result of chemical reaction or occurring in nature; and
- b) Any element or uncombined chemical.

Chemical mixture - means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction, if none of the chemical substances comprising the combination is a new chemical substance and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined. This shall include nonbiodegradable mixtures.

Process - means the preparation of a chemical substance or mixture after its manufacture for commercial distribution:

- a) In the same form or physical state or in a different form or physical state from that which it was received by the person so preparing such substance or mixture; or
- b) As part of an article containing a chemical substance or mixture.

Importation - means the entry of a products or substances into the Philippines (through the seaports or airports of entry) after having been properly cleared through or still remaining under customs control, the product or substance of which is intended for direct consumption, merchandising, warehousing, or for further processing.

Manufacture - means the mechanical or chemical transformation of substances into new products whether work is performed by power-driven machines or by hand, whether it is done in a factory or in the worker's home, and whether the products are sold at wholesale or retail.

Unreasonable risk - means expected frequency of undesirable effects or adverse responses arising from a given exposure to a substance.

Hazardous substances - are substances which present either:

- 1) short-term acute hazards, such as acute toxicity by ingestion, inhalation or skin absorption, corrosivity or other skin or eye contact hazards or the risk of fire or explosion; or
- 2) long-term environmental hazards, including chronic toxicity upon repeated exposure, carcinogenicity (which may in some cases result from acute exposure but with a long latent period), resistance to detoxification process such a biodegradation, the potential to pollute under-ground or surface waters, or aesthetically objectionable properties such as offensive odors.

Hazardous wastes - are hereby defined as substances that are without any safe commercial, industrial, agricultural or economic usage and are shipped, transported or brought from the country of origin for dumping or disposal into or in transit through any part of the territory of the Philippines.

Hazardous wastes shall also refer to by-products, side-products, process residues, spent reaction media, contaminated plant or equipment or other substances from manufacturing operations, and as consumer discards of manufacture products.

Nuclear wastes - are hazardous wastes made radioactive by exposure to the radiation incidental to the production or utilization of nuclear fuels but does not include nuclear fuel, or radioisotopes which have reached the final stage of fabrication so as to be usable for any scientific, medical, agricultural, commercial, or industrial purpose.

Section 6A.04. Regulated Acts. No person, natural or juridical, shall manufacture or process any chemical substance in this province without first securing a clearance therefore from the DENR and a permit from the city/municipal mayor concerned.

Section 6A.05. Rules and Regulations.

- 1) The manufacturer or processor of chemical substances shall submit to the Office of the Mayor concerned the following information:
 - a) the name of the chemical substance or mixture;
 - b) its chemical identity and molecular structure;
 - c) proposed categories of use;
 - d) an estimate of the amount to be manufactured, processed or imported; processing and disposal thereof; and
 - e) any test data related to health and environmental effects which the manufacturer, processor or importer has.
- 2) Testing of chemicals - Testing shall be required in all cases where:
 - a) There is a reason to believe that the chemical substances or mixture may present an unreasonable risk to health or the environment or there may be substantial human or environmental exposure thereto;
 - b) There are insufficient data and experience for determining or predicting the health and environmental effects of the chemical substance or mixture; and
 - c) The testing of the chemical substance or mixture is necessary to develop such data.
 - d) The manufacturers, processors or importers shall shoulder the costs of testing the chemical substance or mixture that will be manufactured, processed, or imported.

Section 6A.06. Exemption. The manufacture of the following chemical substances or mixtures is exempted from the provisions of this article, viz:

- a) Those included in the categories of chemical substances and mixtures already listed in the inventory of existing chemicals;
- b) Those to be produced in small quantities solely for experimental or research and developmental purposes;
- c) Chemical substances and mixtures that will not present an unreasonable risk to health and the environment; and
- d) Chemical substances and mixtures that exist temporarily and which have no human or environmental exposure such as those which exist as a result of chemical reaction in the manufacture or processing of a mixture of another chemical substance.

Section 6A.07. Public Access to Records. The public shall have access to records, reports, or information concerning chemical substances and mixtures including safety data submitted, data on emission or discharge into the environment, and such documents shall be available for inspection or reproduction during normal business hours except when the Department of Environment and Natural resources considers a record, report or information or particular portions thereof confidential and may not be made public when such would divulge trade secrets, production or sales figures or methods, production or processes unique to such manufacturer, processor or distributor, or would otherwise tend to affect adversely the competitive position of such manufacturer, processor or distributor.

Section 6A.08. Prohibited Acts. It is hereby declared unlawful for any person, natural or juridical:

- a) to knowingly use a chemical substance or mixture which is imported, manufactured, processed or distributed in violation of this Article or of RA 6969 or its implementing rules and regulations;
- b) failure or refusal to submit reports, notices or other information, access to records, as required by this Article, or permit inspection of establishment where chemicals are manufactured, processed, stored or otherwise held;
- c) failure or refusal to comply with the pre-manufacture and pre-importation requirements; and
- d) to cause, aid or facilitate, directly or indirectly, in the storage, importation, or bringing into this province, including its maritime economic zones, even in transit, either by means of land, air or sea transportation or otherwise keeping in storage any amount of hazardous and nuclear wastes in any part of this province.

Article B. Administrative Provisions

Section 6B.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the Department of Environment and Natural Resources (DENR) shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 6B.02. Penalty. Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

In case the violation of this Article is committed by a partnership, corporation, association or any juridical person, the partner, president, director or manager who shall consent to or shall knowingly tolerate such violation shall be directly liable and responsible for the act of his employee and shall be criminally liable as a co-principal;

The person or firm responsible or connected with the bringing or importation into this province of hazardous or nuclear wastes shall be under obligation to transport or send back said prohibited wastes.

CHAPTER VII MISCELLANEOUS ENVIRONMENTAL MANAGEMENT POLICIES

Article A. Ban on Slash and Burn Farming Method

Section 7A.01. *Prohibited Acts.* It is hereby declared unlawful for any person to utilize the “slash and burn” farming method in his agricultural activities and such other activities that would result in pollution, acceleration of eutrophication of rivers or lakes or of ecological imbalance.

Article B. Ban on the Cutting of Trees

Section 7B.01. *Regulated Acts.* No person shall cut any kind of tree within the public domain unless a prior clearance to cut a particular tree has been obtained from the concerned office or agency under the Department of Environment and Natural Resources.

Article C. Ban on the Cutting of Coconut Trees

Section 7C.01. *Regulated Acts.* No person, natural or juridical, shall cut any coconut tree for whatever purpose without first securing a permit therefore from the Philippine Coconut Administration (PCA) pursuant to the provisions of RA 8048 and the (City/Municipal) Mayor concerned.

No coconut tree shall be cut except in the following cases and only after a permit had been issued therefor:

- a) When the tree is sixty (60) years old;
- b) When the tree is no longer economically productive;
- c) When the tree is disease-infested;
- d) When the tree is damaged by typhoon or lightning;
- e) When the agricultural land devoted to coconut production shall have been converted in accordance with law into residential, commercial or industrial areas;
- f) When the land devoted to coconut production shall be converted into other agricultural uses or other agriculture-related activities in pursuance to a conversion duly applied for by the owner and approved by the proper authorities: Provided, That no conversion shall be allowed by the PCA until after it shall have been verified and certified that for a period of at least three (3) years the majority of the coconut trees have become senescent and economically unproductive or where the coconut farm is not adaptable to sound management practices on account of geographical location, topography, drainage and other conditions rendering the farm economically unproductive; and
- g) When the tree would cause hazard to life and property.

Article D. Extraction of Quarry Resources

Section 7D.01. *Regulated Acts.* No person, natural or juridical, without a permit therefore from the Provincial Governor shall extract any kind of quarry resources within the jurisdiction of this province including, but not limited to, the following: ordinary stones, sand, gravel, earth, marl, marble, granite, volcanic cinders, basalt, turf and rock phosphates and other quarry resources.

Section 7D.02. *Rules and Regulations.*

1. The permit to extract quarry resources from public lands or from the beds of seas, lakes, rivers, streams, creeks and other public waters within this province shall be issued exclusively by the Provincial Governor after payment of the corresponding tax imposed under existing provincial tax ordinance of this province. However, the permit for the operation of a business dealing on quarrying or extraction of quarry resources shall be issued by the (city/municipal) mayor pursuant to the tax ordinance of the (city/municipality) concerned.
- 2) The proceeds from the tax on sand, gravel and other quarry resources collected by the province shall be distributed as follows:
 - a) **Province - *Thirty percent (30%)***
 - b) **Component city or municipality** - where the sand, gravel, and other quarry resources are extracted - ***Thirty percent (30%)***;
 - c) **Barangay** - where the sand, gravel and other quarry resources are extracted - ***Forty percent (40%)***

Article E. Storing of Flammable, Combustible or Explosive Substances

Section 7E.01. Regulated Acts. No person shall store or keep at his place of business or elsewhere in this province any flammable, combustible or explosive substances without first securing a permit therefore from the (City/Municipal) Mayor concerned thru the Chief of the Fire Station, Bureau of Fire Protection and paying the corresponding fee imposed under existing tax ordinances of the city/municipality concerned.

Section 7E.02. Exemption. Storing of gasoline, diesel fuel or naphtha not exceeding the quantity of *One Hundred* (100) liters in the tank of motor vehicles or other mechanical engines is exempted from the provisions of this Article.

Article F. Disposal of Garbage, Filth and Other Waste Matters

Section 7F.01. Regulated Acts. No person shall dispose of any kind of garbage, filth, or other waste matters, in any place in this city except in places duly designated by the Sanggunian as a garbage disposal area.

Section 7F.02. Definitions. As used in this Article:

Public Place - refers to any place to which the public has access including streets, highways, parks, plazas, alley, sidewalk, *esteros*, *canals* and such other places open to the public.

Section 7F.03. Rules and Regulations.

- 1] All educational and other similar institutions, whether public or private; all commercial and industrial establishments such as hotels, restaurants, hospitals, cinema houses, public markets, department stores, groceries and the like; all public conveyances; all residential houses; and all other similar establishments shall undertake the cleaning of their own estate, yards and immediate premises.
- 2] Garbage, filth and other waste matters shall be placed in a proper receptacle for the collection and disposal thereof by garbage collectors.

Article G. Ban on Smoking at Certain Public Places and Business Establishments

Section 7G.01. Regulated Acts. No person shall smoke any cigar or cigarette in the following places:

- a] Inside the screening room of theaters or cinema houses or in other portions of the theater designated by the person in-charge thereof as a “no smoking” area;
- b] Inside the room of hospitals, clinics and similar places or in other places therein designated by the person in-charge of those institutions as a “no smoking” area;
- c] Inside the classrooms of schools, colleges or other similar educational institutions and other places therein designated by the person in-charge of such institutions as a “no smoking” area;
- d] Rooms or portions of other public places and government offices that has been designated as a “no smoking” area by its operator, manager, administrator or any person in-charge thereof.
- e] Inside public utility vehicles including bus, jeepney, AUVs or Taxi plying within the jurisdiction of this province.

Section 7G.02. Rules and Regulations. It shall be the responsibility of the person in-charge of the operation or administration of a movie house or cinema theater, hospital, clinic, school, college or other educational institutions, and other public places or government offices to put a sign that would inform the public the particular place that has been designated as a “no smoking” area.

Article H. Vandalism of Public and Private Properties

Section 7H.01. Prohibited Acts. No person shall wantonly or deliberately deface or destroy any public or private property, or portion thereof, through any kind or form of vandalism including writing or painting unnecessary letters, words, signs or symbols on any portion of edifices or structures.

Article I. Protection of the Environment from Astray Animals.

Section 7I.01. Regulated Acts. No person shall, wittingly or unwittingly, set loose or let go astray any “dog”, “swine”, “cattle” and other members of the bovine family in any public or private places, whether fettered or not.

Section 7I.02. Definitions. As used in this Article:

Cattle - includes horse, mule, ass, carabao, cow and other domesticated members of the bovine family.

Swine - includes hogs or pigs.

Astray Animal - means an animal which is set loose or not under the complete control of its owner, or the one in charge, or in the possession thereof, or found roaming around, in public or private places whether fettered or not.

Public Place - includes national, provincial, city or barangay roads, parks, plazas, and such other places open to the public.

Private Place - includes privately-owned streets, yards, ricefields, farmlands and lots owned by an individual other than the owner of the animal.

Section 7I.03. Impounding of Astray Animals. Animals caught astray shall be impounded in a corral or place duly designated for such purpose. Impounded animals shall be released to its owner only upon payment of the corresponding poundage fees imposed under existing tax ordinances of the city/municipality concerned.

Section 7I.04. Rules and Regulations.

- 1] Not later than the following day after the animal is impounded, a notice of such impounding shall be posted in at least three (3) conspicuous places including the public market for a period of five (5) days within which the owner of the animal is required to claim and establish ownership thereof.
- 2] If no person shall claim ownership of the animal after the expiration of five (5) days from date of its impounding, it shall be sold to public auction under the following procedures:
- 3] The (City/Municipal) Treasurer concerned shall post a notice for the public auction in at least three (3) conspicuous places including the public market for a period of three (3) days. During the auction sale, the animal shall be sold to the highest bidder. Within two (2) days after the auction sale, the Treasurer shall submit a written report of its proceedings to the Mayor concerned.
- 4] The owner of the animal may stop the said sale by paying at any time, before or during the auction sale, the poundage fee due and the cost of the advertisement and conduct of sale, to the City/Municipal Treasurer. The proceeds of the sale shall be applied to satisfy the cost of impounding, advertisement and conduct of sale. The residue over these costs shall accrue to the General Fund.
- 5] In case impounded animal is not disposed of during the public auction sale, the same shall be considered sold to the city/municipal government concerned for the amount equivalent to the poundage fees due, cost of impounding, advertisement and auction sale.

Section 7I.05. Applicability. This Article shall apply only in cities, municipalities or barangays where there is no existing ordinance dealing on the same subject matter. In case a city/municipality or barangay has an existing ordinance which also pertains to the impounding of astray animals and collection of poundage fees thereof the said ordinance shall prevail over this Article in the spirit of decentralization and in order to enhance the role of the lower local government units in nation building.

Article J. Pissing Ban in Public Places.

Section 7J.01. Regulated Acts. It is hereby declared unlawful for any person to piss, pee or urinate, in any public place in this province, except in appropriate places such as rest room, toilet or lavatory facilities.

Section 7J.02. Definitions. As used in this Article, the term:

Piss or Pee - refers to the act of discharging urine from the bladder.

Public Place - includes roads, streets, alleys, lanes, pathways, parks, plazas, sidewalks and parts or portion of buildings, walls, or fences, and such other places which are open to the public.

Section 7J.03. Applicability. This Article shall apply only in cities, municipalities or barangays where there is no existing ordinance dealing on the same subject matter. In case a city/municipality or barangay has an existing ordinance which also deals on this subject matter the said ordinance shall prevail over this Article in the spirit of decentralization and in order to enhance the role of the lower local government units in nation building.

Article K. Regulations on the Construction of Pens, Corrals, or Stockades

Section 7K.01. Regulated Acts. No person shall construct any kind of pen, corral, or stockade for cattle, swine, chicken, duck and other domestic animals or fowls within this province without securing a permit therefore from the (City/Municipal) Mayor concerned and paying the corresponding fee imposed under existing tax ordinances of that city or municipality.

Section 7K.02. Rules and Regulations. Before an application for a permit is acted upon, the Mayor or his duly authorized representative shall inspect the premises where the pen or corral shall be constructed to determine whether the site and the construction of the pen or corral conforms to existing laws, ordinances, rules and regulations on health, environmental standards, sanitation and zoning.

Article L. Anti-Littering

Section 7L.01. Regulated Acts. No person shall litter, wittingly or unwittingly, any trash, rubbish, scum, cigarette butt, or any kind of waste matter of whatever form, on any public places in this province.

Section 7L.02. Definition. As used in this Article, the term:

Public Place - includes roads, alleys, lanes, pathways, side-walks of streets, parks, plazas, and other places open to public.

Section 7L.03. Rules and Regulations. The driver (chauffeur) of any kind of public utility vehicles including motorized tricycles-for-a fee is hereby required to place a waste basket, waste can, or any appropriate receptacle inside his vehicle for the proper disposition by his passengers of any trash, rubbish, scum or other kinds of waste matters.

Section 7L.04. Applicability. This Article shall apply only in cities or municipalities where there is no existing ordinance dealing on the same subject matter. In case a city/municipality has an existing ordinance which also deals on this subject matter the said ordinance shall prevail over this Article in the spirit of decentralization and in order to enhance the role of the lower local government units in nation building.

Article M. Advertisement by Means of Posters, Placards, Painting on Walls, Slides in Movies, Handbills and Leaflets

Section 7M.01. Regulated Acts. No person shall advertise thru posting; displaying by means of placards or slides in movies, painting on walls of buildings or other structure; and by means of handbills or leaflets without first securing a permit therefore from the City/Municipal Mayor and paying the corresponding fees being required under existing tax ordinances of that city or municipality.

Section 7M.02. Rules and Regulations. Any person desiring to advertise by means of posters, placards, slides in movies, painting on walls or other structure, handbills and leaflets shall file a written application, together with the description of the things to be advertised or the text of the advertisement itself, with the office of the Mayor concerned which shall process the same and issue the corresponding permit upon payment of the required fees therefore.

Article N. Anti-Smuggling of Natural Resources Products

Section 7N.01. Prohibited Acts. No person, natural or juridical, shall smuggle any kind of natural resources products, including but not limited to, the following:

- a] logs, timber and other forest products;
- b] endangered species of flora and fauna, as classified to be such by the DENR;
- c] endangered species of fishes and other aquatic resources as classified to be such by the DENR.

Article O. Miscellaneous Anti-pollution Standards

Section 7O.01. Regulated Acts. No person, natural or juridical, shall construct any building, or install any kind of equipment, or pursue any kind of activity in this province without complying to the following environmental management standards, to wit:

1. **Noise and vibrations.** All noise and vibration-producing machinery shall be enclosed by a building and shall be provided with effective noise-absorbing materials, noise silencers and mufflers, and open yard of a distance of not less than twenty (20) meters from the street or adjoining property planted to dense trees as buffers. To minimize vibration, a machinery should be mounted on shock absorbing mountings, such as cork set on reinforced concrete foundations or a floating isolated foundation set on piles, as needed by the machinery concerned to reduce all noise and vibration to a reasonable minimum. Noise which is objectionable due to intermittence beat frequency or high pitch shall not be allowed unless enclosed in a soundproof building as tested and approved by the Sanggunian upon consultation with the national agencies concerned.
2. **Smoke.** Any smoke emitting from any source for a period aggregating seven (7) minutes in any thirty minutes particularly when starting a new fire, shall have a density not greater than Number 2 (No.2) of the Ringleman Chart.
3. **Dust, dirt and fly ash.** The emission of dust, dirt or fly ash from any source of activity which shall pollute the air and render it unclean, destructive, unhealthful, hazardous, or cause visibility to be impaired shall not be permitted. In no case whatsoever shall dust, dirt or fly ash be allowed to exceed 0.68 grams per cubic meter of flue gas at stack temperature of 60° Centigrade not to create a haze with opaqueness equivalent to or greater than number one (No. 1) of the Ringleman Chart.
4. **Odors and gases.** The emission of foul odors and gases deleterious to public health, safety and other general welfare shall not be permitted. Building and activity emitting foul odors and obnoxious gases shall be enclosed by air tight buildings provided with air conditioning systems, filters, deodorizing and other air cleansing equipment.

5. **Glare and heat.** Glare and heat from any operation or activity shall not be allowed to be radiated, seen or felt from any point beyond the limits of the property.
6. **Industrial Waste.** Industrial plant wastes shall be disposed of only in a manner which will not create any nuisance or danger to adjoining properties or to the community in general.
7. **Sewerage Disposal.** No sewerage dangerous to the public health, safety and general welfare shall be discharged into any public sewer system, natural waterway or drainage channel. In addition to the following requirements, all sewerage disposal shall comply with the pertinent rules and regulations promulgated by the National Pollution Control Commission.
8. **Acidity or alkalinity.** Acidity or alkalinity shall be neutralized to a PH of between 6.5 and 8.5 as a daily average to a volumetric basis with a temporary variation of 5.0 to PH 10.0.
9. **Waste water.** Waste water shall not contain grease and oil in excess of 300 PPM or exceed a daily average of 10 PPM. (*Excerpts from the Model Zoning Ordinance prepared by the HLURB*).

Article P. Administrative Provisions

Section 7P.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the agencies of the government concerned shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 7P.02. Penalty. Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER VIII
ENVIRONMENTAL PROTECTION THRU PROPER MANAGEMENT
AND DISPOSAL OF WASTE**

Article A. Scope and Definitions

Section 8A.01. Scope. This Article shall apply to public and private sewage and excreta collection and disposal systems; projects being undertaken by any government agency or instrumentality, firms, individuals or other entities.

Section 8A.02. Definition of Terms. As used in this Article the terms below shall mean as stated herein:

Excreta disposal facilities - shall mean any of the following:

- Flush toiler connected to community sewer; imhoff tank; septic tank; digester tank; or chemical tank
- Pit privy such as: Ventilated Improved Pit (VIP) Latrine; Pit type; “Antipolo” toilet

- Any disposal device approved by the Secretary of Health or his duly authorized representative.

Communal Excreta Disposal System - an excreta disposal system serving a group of dwelling unit.

Chemical Privy - a privy where fecal matter is deposited into a tank containing a caustic chemical solution to prevent septic action while the organic matter is decomposed.

Digestive Cesspool - a pit for the reception or detention of sewage.

Distribution Box - a small concrete receptacle between the septic tank and the drain field from which lines of drain tiles extend and which acts as surge tank to distribute the flow of sewage equally to each line of drain tiles.

Distribution line of a leaching tile system - the pipe from within the distribution box to the drainfield.

Domestic Sewage - the sewage containing human excrement and liquid household waste. Also called sanitary sewage.

Drainage System - the drainage pipes of plumbing system taking the waste water from the plumbing fixtures and delivering it to the sewer or some other outlet.

Freeboard or Airspace of a Septic Tank - the distance as measured from the liquid level line to the inside top of the septic tank.

House Sewer - the pipeline conveying sewage from the house or building to the septic tank or to any point of discharge.

Individual Excreta Disposal System - an excreta disposal system serving a dwelling unit.

Individual Sewage Disposal System - a sewage disposal system serving unit/building.

Operational Permit - the permit to discharge from sewage disposal system.

Privy - a structure which is not connected to sewerage system and is used for the reception, disposition and storage of feces or other excreta from the human body.

Public Sanitary Sewer - is a common sewer to which all abutters have equal rights of connection.

Public Toilet - a toilet facility located at public places like markets, bus station, buildings, etc. intended for public use.

Sanitary Engineer - a person duly registered with the Board of Examiners for Sanitary Engineers (R.A1364) and who heads the sanitation division or section or unit of the (City/Municipal) Health office.

Sanitation Inspector - a government official or personnel employed by the City government, who enforces sanitary rules, laws and regulations and implements environmental sanitation activities under the supervision of the (City/Municipal) Health officer.

Septic Tank - a water tight receptacle which receives the discharge of a plumbing system or part thereof, and is designed to accomplish the partial removal and digestion of the suspended solid matter in the sewage through a period of detention.

Septic Tank Absorption Bed or Drain Field - an underground system of pipes leading from the outlet of the septic tank, consisting of open jointed or perforated pipes so distributed that the effluent from a septic tank is oxidized and absorbed by the soil.

Sewage Disposal System - a system a of collection, transportation, treatment and disposal of sewage.

Sewer - pipe, conduit, or channel intended to convey sewage.

Sewage or Sewerage Works - system of pipes, pumps, devices and other appurtenant structures for the collection, transportation and final disposal of waste water.

Article B. Operation of Public and Private Sewage Systems; Excreta Collection and Disposal Systems or Projects by any Government Agency or Instrumentality; Private Firms or Corporations and other Entities.

Section 8B.01. Regulated Acts. No person, natural or juridical, shall establish or operate any public and private sewage systems; excreta collection and disposal systems or projects by any government agency or instrumentality; private firms or corporations and other entities, without first securing a “sanitary permit” therefore from the (City/Municipal) Health Officer.

Article C. Rules and Regulations

Section 8C.01. Individual Excreta and Sewage Disposal.

- 1) Every new house/building to be constructed shall be provided with plans and specifications for excreta disposal system approved by the (City/Municipal) Health Officer concerned prior to the issuance of the corresponding building permit by the (City/Municipal) Engineer.
- 2) The designated Building Official shall refer all application for Sanitary (Plumbing) Permit to the (City/Municipal) Health Officer for checking of sanitary facilities, prior to the issuance of the building permit.
- 3) All houses/building without an approved excreta disposal system shall be required to construct such facilities under the supervision of the (City/Municipal) Health Officer or his duly authorized representative.
- 4) The privy recommended for use is the sanitary privy. It shall conform with the following minimum requirements.
 - a) It shall consist of an earthen pit, a floor covering the pit and a water-sealed bowl. It shall be so constructed in order that fecal matter and urine to be deposited into the earthen pit which shall be completely fly-proof.
 - b) The pit shall be at least one meter square.
 - c) The floor should cover the pit tightly to prevent the entrance of flies. It shall be concrete or other impervious material.

- d) The water-sealed bowl shall be joined to the floor so as to form a water-tight and insect proof joint.
- e) A suitable enclosure, shall be constructed to provide comfort and privacy for the users of the privy.
- f) Wooden floors and set rises shall not be used.

Individual Sewage Disposal System

Installation requirements

- 1) When a public sanitary sewer is not available in any street abutting such a lot or premises, waste water piping from any building or works shall be provided with individual sewage disposal system approved type and design.
- 2) The public sanitary sewer may be considered as not being available when such public sanitary sewer is located more than 100 meters from any proposed building or any lot or premises.
- 3) Individual sewage disposal system shall not be installed, maintained or operated on property accessible to public sanitary sewage system.
- 4) Sanitary (Plumbing) Permit shall not be issued for installation, alteration or repair of any private sewage systems or part thereof, on any lot for which a connection with public sanitary sewer is available.
- 5) Each individual sewage disposal system shall serve a dwelling on an individual lot and shall be properly maintained in good working condition by the owner. Any failure to provide and properly maintain such a system or to discharge all the sewage from the premises into the disposal system may be declared as a public health hazard by the Sangguniang (Panlungsod/Bayan) concerned..
- 6) Whenever an approved public sanitary sewerage system is accessible to the property, any individual sewage disposal system shall be abandoned and the house sewer shall be directly connected to the public sewer.

Approval

- 1) The property owner or his authorized representative or agent shall file an application for a Sanitary (Plumbing) Permit with the Office of the (City/Municipal) Health Officer concerned for construction, installation, alteration, or extension of an individual sewage disposal system and the sub-surfaced absorption system or other treatment device prior to the start of work therein.
- 2) The application shall be made in writing on a form prescribed by the Department of Health and shall contain all pertinent information relative to the location, construction, installation, alteration or extension of a individual sewage disposal system.

Requirements for the issuance of a Sanitary Plumbing Permit:

- 1) Plot plan drawn to scale completely dimensioned, showing direction and approximate slope of surface, location of all present or proposed retaining walls, drainage channels, water supply lines or wells, paved areas and structures on the plan, number of bedrooms or plumbing fixtures in each structure and location of the building sanitary sewer and individual sewage disposal system with relation to lot lines and structures.
- 2) Necessary plans and specification shall be prepared, signed and sealed by a Registered Sanitary Engineer or a Registered Master Plumber, as the case may be.
- 3) A log of soil and ground water levels as determined by test holes dug in close proximity to any proposed seepage pit or disposal field, together with a statement of water absorption characteristic of the soil at proposed site as determined by approved percolation tests.
- 4) Location of any toilet or sewage disposal system shall be in accordance with the plans and specification prescribed by the Department of Health.

Disposal of Sewage

- 1) Untreated sewage and effluent of septic tank or other putrescible or offensive wastes shall not be discharged onto the surface of the ground or into any streets, road, alley, open excavation, storm water sewer, land drain ditch, adjoining property, watercourse or body water.
- 2) Sewage and effluent of a septic tank or other putrescible, impure or offensive wastes shall not be discharge into an abandoned water supply well, spring, or cistern or into a natural or artificial well, sink hole, crevices or other opening extending into limestone s or other rock or shale formation.
- 3) Individual sewage disposal system utilizing leaching fields, leaching beds, leaching wells shall not be permitted where the depth to normal ground water or rock strata is less than 1.20 meter.
- 4) A leaching system shall not be installed in an area where the texture, structure and porosity of the soil are not suitable as determined by a percolation test performed by a registered civil/sanitary engineer.
- 5) No leaching tile field or bed shall installed where percolation rate less than 2.54 cm. (1 in.) fall in water level the test holes in 60 minutes.
- 6) No seepage pit or leaching well shall be installed where the percolation rate is less than 2.54 cm (1 in.) fall in water into the test holes in 30 minutes.
- 7) No person shall install individual household sewage disposal system in a new subdivision, unless its site is considered to be impracticable and inadvisable to install a public sewage collection system with the required treatment.

Operational Permit

- 1) No person shall discharge or permit or cause to be discharge the effluent from an individual sewage disposal system or other putrescible or offensive wastes from his premises unless an operational permit therefor has been secured from the Office of the Mayor upon the recommendation of the (City/Municipal)

Health Officer in accordance with existing (city/municipal) ordinances on that matter.

- 2) Only person or dwelling owner who complies with the requirements of these rules and regulations shall be entitled to receive and retain an operational permit.
- 3) The (City/Municipal) Health Officer or his duly authorized representative may inspect the sewage disposal system, sample the effluent, or take any other step which he deems necessary to ensure compliance with these rules and regulations.

Lot Dimension and Areas

- 1) Individual sewage disposal system shall be installed on sufficient area and suitable topography to permit compliance with these rules and regulations.
- 2) The design, construction, installation, location, maintenance, and operation of individual sewage disposal system including septic tanks, leaching tile fields, leaching beds, leaching wells, house sewers, privies and any other treatment system or part thereof shall comply with the minimum standards and engineering practices which are acceptable to the DOH.

Section 8C.02. Design and Construction of Septic Tanks, Leaching Tile Field and House Sewers.

Septic Tank

Inlet and outlet

- 1) The invert level of the inlet shall not be less than 5 centimeters (2 inches) above the liquid level of the tank.
- 2) A vented inlet baffle or sanitary tee shall be provide to divert the incoming sewage downward. The baffles or tee shall penetrate at least 15 cm. (6 inches) below the liquid level, but the penetration shall not be greater than that allowed for the outlets baffle or sanitary tee.
- 3) The outlet shall be fitted with a sanitary tee or baffle.
- 4) The outlet baffle or sanitary tee device shall extend through the scum layer above the liquid level of the tank to approximately 2.5 cm. (1 inch) from the inside top from the tank.
- 5) The invert of the inlet pipe shall be at a level not less than 5 cm. (2 in) above the invert of the outlet pipe.
- 6) Inlet and outlet pipe fittings or baffles, through compartment petition shall have a free vent equal to the required cross-sectional area of the house sewer discharging therein.

Tank Proportions

The septic tank may have various shapes provided the capacity, inlet, outlet and depth requirements are met. Generally the septic tank is rectangular in

shape. If 2 or more compartments are used, the first compartments shall have the capacity from one half to two thirds of the total volume of the tank.

The septic tank shall have a liquid drawing depth not less than 1.20 meters (4 feet).

The vertical distance from the liquid level to the inside top of the tank shall be at least 20 cm. (8 in).

Inspection Manholes

The septic tank shall be provided with an inspection manhole 0.36 m² (4 ft²) in minimum area or by an equivalent removable cover slab to provide access to the inlet and outlet devices and to the compartment of the tank for inspection and cleaning. One access manhole shall be located over each compartment. Septic tanks installed under concrete or block top paving shall have the required manholes accessible by extending the manhole openings to grade.

Construction of Septic Tank

Plans and specification for all septic tanks shall be submitted to the Office of the (City/Municipal) Health Officer for approval. Such plans and specifications shall show all dimensions, reinforcement, structural calculations and such other pertinent data as may be required.

Septic tanks shall be constructed of sound durable materials, not subject to excessive corrosion or decay and shall be watertight. Each septic tank shall be structurally designed to withstand all anticipated earth load or other loads and shall be installed level on a solid bed. Structural and hydraulic design shall be in accordance with good engineering practice.

Approved pre-fabricated septic tanks may be used. After installation, the tank shall be filled with sufficient amount of water to prevent floating.

Roof drains, foundation drains, area drains or cistern overflows shall be made to enter the septic tank or any part of the treatment.

Location

The septic tank shall be located not less than 25 meters from any well, spring, cistern, or other sources of drinking water supply; not less than 1.5 m (5 ft) from any water service line; and not less than 3.0 m. (10 ft.) away from the water main.

Septic tank shall be located such that dislodging equipment can have access to the opening manholes conveniently.

Septic tanks shall not be located under the building.

Maintenance

Septic tank shall be cleaned before excessive sludge or scum is allowed to accumulate and seriously reduce the settling efficiency.

Septic tank shall be inspected at least once a year and be cleaned when the bottom of the scum mat is within 7/50 (3 inches) of the bottom of the outlet device or the sludge and scum has reduced the liquid capacity by 50%.

Tanks shall not be washed or disinfected after cleaning. A small residual of sludge shall be in the tank for seeding purposes.

Sludge from septic tanks shall be disposed by burying or any other method approved by the DOH thru its duly authorized representative and not being emptied into open field, ditches or bodies of water.

Leaching Tile Field

Design

A leaching tile system utilizing trenches 0.45 m.–0.90 m. wide is considered to be a leaching tile field.

A leaching tile system utilizing trenches more than 0.90 meter (36 inches) wide is considered to be a leaching bed.

Leaching tile field and leaching beds, based on percolation tests, shall have a minimum absorption area equivalent to that required for a small dwelling unit having flow of 50 gal/cap/day. Only the trench bottom area is to be calculated as absorption area.

Leaching tile field or leaching bed or leaching well or chamber shall not be installed in any of the following:

- a) In swampy area or where ponding or flooding is likely to occur.
- b) Where the percolation rates exceeds 60 minutes per 2.5 cm. (1 in.) of water fall.
- c) Where the depths to normal ground water or rock strata is less than 1.2 m (4 ft) below the bottom of the device.

Construction

Drain lines shall be constructed of materials not subject to excessive deterioration and shall be laid with open joints, except that perforated clay tile, perforated bituminous fiber pipe, or other approved materials may be used, provided that sufficient openings are available for distribution of the effluent into the trench areas. (Total area of perforations shall be at least 150% of the cross-sectional area of the pipe).

The drain lines shall have a minimum diameter of 100 mm. (4 in.) and shall have a relative level grade, but in no instances shall have a fall greater than 1 cm. in 60 minutes.

In leaching tile fields the minimum distance between centerline of trenches shall be at least 1.80 (6 ft.).

In leaching beds, lines for distributing effluent shall be spaced 0.90 m. (3 ft.) from side to side of trench walls.

Final grading shall be completed prior to installing a leaching field or leaching bed.

The leaching tile field or leaching bed shall have a minimum depth of 30 cm. (12) of clean gravel, stone or slag fill, extending at least 50 cm. (2 in.) above and 15 cm. (6 in) below the drain lines. The filter material shall be 2 cm. to 6.5 cm. (0.80 to 2.5 in.).

The absorption trenches shall have a minimum depth of 45 cm. (18 in.) but not more than 7 cm. (30 in.)

Before placing filter material and drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed from trenches by raking to a depth of 2.5 cm and the loose material is removed. Clean stone, gravel, slag or similar filter material varying in size from 2.0 cm. to 6.5 cm shall be placed in the trench to the depth and grade required by this section. The drain lines shall then be covered with previous material to the minimum depth of 5 cm. as required by this section, and this covered with untreated building paper, straw or similar porous material to prevent closure of voids with earth backfill.

Where two or more drain lines are installed, an approved distribution box, of sufficient size to receive lateral lines shall be constructed at the head of each disposal field. The inverts of all outlets shall be level and the invert of the inlet shall be at least .25 cm. above the outlets. Suitable baffles shall be provided to insure equal flow. Distribution boxes shall be built on a level concrete slab in natural or compacted soil.

All laterals from an approved distribution box to the disposal field where the grade exceeds 1:2000 (0.0005%) shall be bell and spigot vitrified clay or other approved pipe with water tight joints. Multiple disposal field laterals, whenever practicable, shall be of uniform length.

Connection between a septic tank and distribution box, or between a distribution box and drainfield, shall be laid with approved watertight joints on natural ground or compacted fill.

Heavy equipment shall not be used over the tile field or bed after the tile and gravel are in place.

Disposal fields shall be constructed as follows:

Minimum number of drain lines per field	1
Maximum length of each line	30.0 m
Minimum bottom width of trench	0.45 m
Minimum spacing side wall to side wall	0.90 m
Plus 0.6 m for the additional	0.3 m of depth
Minimum depth of earth cover over lines	0.30 m
Maximum grade lines	0.5%
Minimum grade lines	0.25%
Minimum filter material over drain line	5.0 cm.

Location

The leaching tile field or leaching bed shall be located not less than twenty five (25) meters (80 ft.) from any well, spring, cistern, or other source of drinking water; not less than 3 in. (10 ft) from an occupied building; and not less than 1.5 m. (5 ft) from any lot line.

House Sewers

Design

The size of any house shall be determined on the basis of the total number of fixture units drained by such sewer. Minimum size shall not be less than 100 mm. (4 in.) in diameter.

Materials

Vitrified clay sewer pipe
Asbestos cement pipe
Cast iron pipe
Bituminized fiber pipe
Glass pipe
Any other pipe approved by the
Bureau of Standard, Department of
Trade and Industry

Installation

The houses sewer shall be laid in good alignment and at a uniform slope of not less than 1:50 (0.02%) toward the point of disposal; provided that, where, it is impracticable, due to the depth of the street sewer or to the structural features or to the arrangement of any building or structure, to obtain a slope of 1:50 (0.02%), any such pipe or piping 100 mm diameter or larger may have a slope of not less than 1:100 (0.01%).

Whenever the house sewer is located within 25 meters of a well or spring or any drinking water source, the house sewer shall meet the ten (10) foot head of water test for fifteen minutes. When water is not available or when there is a danger of freezing, the air or smoke test may be used.

House or building sewer piping shall be laid in ground shall be laid in abed of approved materials and shall be adequately supported.

House sewer of other drainage piping or part thereof, which is made of materials other than those approved for use under or within a building, shall not be installed under or within 0.60 m. (20 ft.) of any building, or structures or parts thereof, nor less than 0.30 m (1 ft.) below the surface of the ground. The provisions of this paragraph include structures such as porches and steps, whether covered or uncovered, roof patios, carports and steps, whether covered or uncovered, roof patios, carports, covered walls, covered driveways and similar structures or appurtenances.

Non-metallic house sewer piping shall not be run or laid in the same trench with water service pipes or any underground water pipes unless both of the following requirements are met:

1. The bottom of the water piping at all points shall be at least 30 cm. (1 ft.) above the top of the sewer pipeline.
2. The water piping shall rest on a solid shelf at one side of the common trench.

SECTION 8C.03. *Rules and regulations in the construction of public sewerage system.*

- 1) Any person, government, private entity, firm and/or agency, corporation, institution or local government unit intending to construct a public sewerage system or sewage treatment plant shall submit plans, design and the necessary data and specifications to the Secretary of Health thru the (City/Municipal) Health Officer or his duly authorized representative, for approval thereof prior to the start of work. In case there is an existing one, its “as-built” plan and specification shall be submitted for review and approval by the DOH or its authorized representative.
- 2) It shall be unlawful for any person entity, or firm to discharge untreated effluent of septic tanks and or sewage treatment plants to bodies of water without obtaining approval from the Secretary of Health or his duly authorized representative.
- 3) Sludge septic tanks and sewage treatment plant shall be disposed of in a manner approved by the Department of Health.

1. *Provision of Sewerage System*

Approval of Sewage Disposal Plan

- a) Plans of subdivisions indicating all lots therein shall be submitted to the DOH, thru the (City/Municipal) Health Officer, for approval of the sewage disposal system before any construction is started or before any of the lots in the subdivision are sold or offered for sale whether or not each sale entails sold or offered for sale whether or not each sale entails transfer of title or deed.
- b) If individual sewage disposal system or individual water supply or both are proposed, the plot shall contain all pertinent information relative to the installation of these systems.

Provisions of Sewerage

Whenever feasible, the proposed subdivision shall be served by extension of the existing public sanitary sewerage system or by a community sewerage and sewage treatment system.

Proper Disposal of Sewage

The proper disposal of sewage in subdivisions shall conform with the provisions of these rules and regulations.

Operation of Sewage Treatment Plants

The sewage treatment plant shall be capable of treating the flow of sewage discharge by the community in the area.

The type of sewage treatment plant shall be approved by the Secretary of Health or his duly authorized representative and the effluent from treatment

plants shall meet the standards formulated by the Department of Environment and Natural Resources.

The sewage treatment plant shall provide laboratory facilities for control tests and other examinations needed.

Operating data, control test and such other records as may be required shall be forwarded to the Office of the Mayor thru the (City/Municipal) Health Officer.

The Office of the Mayor shall be informed in case of break-down or improper functioning of the treatment works.

Where sewage treatment plant is provided, no sewage shall be allowed to by-pass the plant.

The sewage treatment shall be managed by a registered sanitary engineer.

Section 8C.04. *Damage to Public Sewer Disposal System*

It shall be unlawful for any person to discharge, by any means whatsoever, into any plumbing fixtures, such as floor drain, sump, receptacle or device which is connected to any drainage system, public sewer, septic tank or cesspool any ashes, cinders, solids, rags, flammable, poisonous or explosive liquids or gases, oils, grease and any other thing whatsoever which would or could cause damage to the public sewage disposal system whether or not the system is government or privately-owned.

Section 8C.05. *Rules and Regulations on Abandoned Sewerage and Sewage Disposal Facilities.*

- 1) Every abandoned building or house sewer or part thereof, shall be plugged or capped within 1.5 meter of the property line.
- 2) Every cesspool, septic tank and seepage pit which has been abandoned or had been discontinued otherwise from further use or to which no waste or soil pipe from a plumbing fixture is connected, shall have the sewage removed therefrom and be completely filled with earth, gravel, concrete or other approved material.
- 3) Every top cover of the cesspool, septic tank or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until inspection has been called. After an inspection by the (City/Municipal) Health Officer or his authorized representative, the cesspool, septic tank or seepage pit shall be filled to the level of the top of the ground.
- 4) It is unlawful for a person owning or controlling any cesspool, septic tank, or seepage pit on his premises or in that portion of any public street, alley or other public property abutting such premises to refuse or neglect to comply with the provision of this section or upon receipt of notice from the (City/Municipal) Health Officer.
- 5) In case the disposal facilities are abandoned, consequent to connecting any premises with the public sewer, the person making the connection shall fill all abandoned facilities within 30 days from the time of connecting to the public sewer.

Section 8c.06. Drainage.

It shall be the responsibility of the (city/municipal) government concerned to provide and maintain in a sanitary state and in good repair a satisfactory system of drainage in all inhabited areas where waste water from buildings and premises could empty without causing nuisance to the community and danger to the public health.

Buildings or premises producing waste water shall be connected to the (city/municipal) drainage system in all areas where it exist.

Section 8C.07. Special Establishment

Establishment such as industrial, laundry, slaughter houses, dairies, poultries, piggeries, mining, hospitals, clinics, funeral parlors, laboratories and other similar establishment discharging waste water into receiving river or other water bodies which create pollution problems shall be required to obtain a permit or clearance from the Department of Environment and Natural Resources before construction and issuance of the sanitary permit by the (City/Municipal) Health Officer.

Section 8C.08. Special Precaution for Radioactive Excreta and Urine of Hospitalized Patient.

Patient given high doses or radioactive isotope for therapy shall be given toilet facilities separate from those used by “non-radioactive” patients.

Radioactive patients shall be instructed to use the same toilet bowl at all times and flush it at least three times after its use.

Article D. Administrative Provisions

Section 8D.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the agencies of the government concerned shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 8D.02. Penalty. Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER IX
ENVIRONMENTAL PROTECTION THRU PROPER SOLID WASTE MANAGEMENT**

Article A. Scope and Definitions

Section 9A.01. Scope. This Chapter shall apply to:

All occupants, owners, tenants, lessees of buildings and dwelling houses;

Owners or operators of industrial, commercial or business establishments;

Government agencies or instrumentalities;

Government agencies or entities including government owned or controlled corporations (GOCC);

Private firms or corporations and institutions,

Refuse collectors, disposal area operators, junk dealers, scavengers; and

All other persons and entities generating, accumulating, storing, collecting, transporting, processing, treating, utilizing and disposing refuse (solid waste) or other waste matter.

Section 9A.02. Definition of Terms. As used in this Chapter, the following terms shall mean as stated herein:

Agricultural Waste - waste generated from planting or harvesting of the crops, trimming or pruning of plants, and waste or run off materials from farms or fields.

Ashes - the residue from the burning of wood, coal, or other solid combustible materials.

Biodegradable Waste - any material that can be reduced into finer particles (degraded or decomposed) by micro-biological organism or enzymes.

Chemical Waste - comprises of discarded solid, liquid and gaseous chemicals. Chemical waste may be hazardous or non-hazardous. It is considered to be hazardous (acids of pH<2 and bases of pH>2), flammable, reactive (explosive, water reactive, shock sensitive), or genotoxic carcinogenic, mutagenic, teratogenic or otherwise capable of altering genetic material). It is considered non-hazardous if it consists of chemicals other than those described above.

Commercial Refuse - refuse resulting from the use or occupation of any commercial or business establishment or premises where any business or work is carried out, other than a manufacturing process.

Composting - a process of biological degradation under controlled conditions; the processing of biodegradable waste such as food waste, garden waste, animal waste, human waste into soil conditioner/enhancer or humus by mixing them with soil, water, biological additives or activators and air.

Contamination - the presence of pathogenic organisms suspended air emission, heavy metals, chemicals and other pollutants in an inanimate article or substance.

Disposal Area - any site, location, tract of land, or structure used or intended to be used for refuse disposal.

Domestic Refuse - refuse from household, as distinguished from the industrial, commercial and institutional waste.

Ecological Waste Management - a method of handling wastes that facilitates their sanitary retrieval, reuse or recycling without degrading the environment nor polluting air, water and soil.

Garbage - refers to the wastes or rejected food constituents which have been produced during the preparation, cooking or storage of meat, fruit, vegetable and other food materials.

Garden Refuse - waste from cutting or lopping of grasses, trees. Bushes, shrubs, flowers, seeds, or other similar materials.

General Waste - domestic type of waste and other waste materials or substances that do not require special handling.

Hazardous Waste - any waste that is potentially dangerous to environment and health because of chemical reactivity, flammability, and explosiveness.

Health Care Facility - includes, hospitals, clinics, laboratories, research institutions and other similar establishments.

Health Certificate - a certification in writing issued by the (City/Municipal) Health Officer using the prescribed form to a person after passing the required physical and medical examinations and having been administered the required immunizations.

Incineration - the controlled process by which combustible waste are burned and change into gases and residues that contain little or no combustible material.

Industrial Refuse - solid waste resulting from industrial processes and manufacturing operations, such as food processing waste, broiler house cinders, wood, plastic, and metal scraps and shaving and other similar wastes.

Infectious Waste - includes cultures and stocks of infectious agents from laboratory work, waste from surgery and autopsies of patients with infectious disease, waste from patients in isolation wards, waste from potentially infectious cases, waste that has been in contact with infected patients undergoing haemodialysis and waste that has been in contact with animals inoculated with an infectious agent or suffering from infectious disease.

Junk Dealer - any person, firm, agency, or entity engaged in the collection, transportation, sorting, segregation, storing, exchange or sale of waste matter or rubbish, or any old, used or secondhand materials of any kind, including cloth, rags, paper, bottle, rubber, iron, brass, copper or other metal, furniture, used motor vehicle or parts thereof, or any other article which from its worn condition renders it practically useless for the purpose for which it was made and which is commonly classified as junk.

Night Soil - any refuse material composed wholly or partly of human excrement and shall include the extracted contents from privies, privy vaults, latrines, septic tank, cesspools, sanitary sewage grit chambers, screens or racks, grease traps, raw sewage sludge, and other such materials retaining the characteristics of human excrement, provided that properly digested and dried sewage from the public sewage treatment plant shall not be included.

Non-biodegradable - refers to non-compostable, non-putrescible waste..

Offal - a site for the disposal of refuse where waste is exposed in the open.

Open Dumpsite - a site used for the disposal of refuse where waste is exposed in the open.

Operating Permit - the permission or certification in writing issued by the regional health officer or his duly authorized representative that the refuse collection and disposal system complies with the existing sanitation requirements upon evaluation and inspection.

Pathological Waste - includes tissues, organs, or body parts from the surgical operations, biopsy and autopsy, remains, aborted fetuses and animal carcasses, and blood and body fluids.

Pharmaceutical Waste - includes spoiled, spilled, banned, expired, contaminated or used pharmaceutical products, drugs and chemicals that are to be discarded because they are no longer needed.

Pressured Can or Container - includes innocuous or inert gas and aerosol can or container that may explode when incinerated or accidentally punctured.

Radioactive Waste - waste contaminated with radioactivity generated from hospital nuclear medicine section, research institution, nuclear plant, radioactive, diagnostic and therapeutic procedures and the paraphernalia used.

Recyclable Waste – any waste materials that can be retrieved and re-used as feeds, factory returnable, fuel, fermentables, fine crafts or filling materials.

Refuse or Solid Waste - all organic and inorganic non-liquid and non-gaseous portions of the total waste mass. It consist of all putrescible and non-putrescible solid materials except for body waste.

Refuse or Solid Waste Disposal - complete final discarding of waste materials that cannot be reused and recycled.

Refuse or Solid Waste Management - an integrated system, approach or process on the generation, segregation, storage, collection, transport, processing, recycling, recovery and final disposal/containment of solid waste.

Resource Recovery - the extraction of materials or energy from wastes.

Rubbish - refers to the non-putrescible solid waste constituents and includes such items as papers, tin cans, glass, wood, bottles, broken glass, cardboard, plastic, yard cuttings, discarded porcelain wares pieces of metals and other wrapping materials.

Sanitary Engineer - a person duly registered with the Board of Examiners for Sanitary Engineers (Republic Act 1364) and who heads or works with the sanitation division/section/unit of (City/Municipal) Health office or rural health unit or employed with Department of Health or its field health offices.

Sanitary Landfill - a land disposal site employing an engineered method of disposing solid waste on land in a manner that minimize environmental hazards by spreading the solid waste in thin layers, compacting the solid wastes to the smallest practical volume, and applying cover material at the end of each operating day.

Sanitary Permit - the permission or certification in writing issued by the (City/Municipal) Health officer or sanitary engineer that the establishment complies with existing minimum sanitation requirements upon evaluation or inspection conducted in accordance with Presidential Decree Nos. 522 and 856 and local ordinances.

Sanitation Inspector - a government officer employed by the local government, who enforces sanitary rules, laws and regulations and implements environmental sanitation activities under the supervision of the (City/Municipal) Health officer.

Scavenger - a person engaged in the business of collection, recovery and transportation of recyclable refuse by specific hire or contract with another individual firm, corporation, public agency or institution and does not include public agency responsible under existing law for the collection of refuse in a given jurisdiction.

Sharps - include needles, syringes, scalpels, saws, blades, broken glass, nails and any other items that can cause a cut or puncture.

Swill - includes that particular garbage which is wholly or nearly so, edible and usable as a food and having food value for animals or fowls, accumulating from animals, vegetable or other matter washed from household or food establishments.

Vermin - a group of insect such as flies, mosquitoes, cockroaches, lice, ticks and bedbugs, or small animals such as mice and rats that are vectors of disease.

Vermin Abatement Program - a series of preventive and control procedures and activities for vermin control.

Article B. Operation of refuse collection services, refuse disposal area and facilities, swill collection, junk dealership, private scavenging or swine feeding platform and similar kinds.

Section 9B.01. Regulated Acts. No person, natural or juridical, shall establish or operate any refuse collection services, refuse disposal area and facilities, swill collection, junk dealership, private scavenging or swine feeding platform and similar kinds, without first securing a "sanitary permit" therefore from the (City/Municipal) Health Officer.

Article C. Rules and Regulations

Section 9C.01. Operating Permit Requirements. No persons, natural or juridical, shall operate or establish the following business or trade undertaking without first securing an "operating permit" from the Regional Director of the Department of Health or his duly authorized representative, viz:

- 1) Refuse collection service
- 2) Refuse disposal area and facilities.

The following requirements shall be submitted by the proponent before the issuance of an operating permit:

Letter of application,
Project description,
Location plan, and
Technical specification, description of
facilities and equipment

The operating permit may be suspended or revoked by the DOH Regional Director for violation of the provisions of this Chapter.

Section 9C.02. Exemption. The following are exempted from the operating permit requirement but shall be required to register the service with the Office of the (City/Municipal) Health Officer and to comply to all sanitary requirements for collection, transportation and/or disposal of refuse.

- a) Industrial or commercial or business establishment operating its own collection service entirely for the benefit of such establishment and disposing of refuse at a public disposal area.
- b) Owner of farms collecting and disposing refuse on his premises or disposing them at a public disposal area.
- c) Owner or occupant of dwelling units who feeds his table scraps, swill, or garbage to animals or fowls owned by him on his premises, or for collecting and transporting refuse from such premises in a vehicle owned and operated by him to a public disposal area.
- d) Junk dealers and scavenger.
- e) Person who operates a feeding platform for feeding garbage or swill to swine.
- f) All domestic garbage grinder installation and operation.

Section 9C.03. Sanitary Requirements for the Segregation and Storage of Refuse or Solid Waste.

The following shall be the minimum requirements for sanitary segregation and storage of refuse or solid waste pending collection:

There shall be a separate container for each type of waste in all establishment and dwelling units.

The refuse container depending on its use shall be properly marked for on-site collection such as “biodegradable waste” or “non-biodegradable waste” or “infectious waste” or “chemical waste” or “radioactive waste” or “sharps” in bold letters with a height of 5 centimeters in size, or in any case, refuse container shall be painted with a particular color identifying the waste or lined with color-coded plastic bags.

Standard color coding for refuse storage:

- Black** - for storage of non-biodegradable general waste.
- Green** - for storage of biodegradable general waste.
- Yellow** - for storage of infectious and pathological waste.
- Orange** - for storage of radioactive waste.
- Red** - for storage of sharps and pressurized containers (or punctured-proof containers for sharps).
- Yellow with black band** - for storage of chemical waste.

Refuse/solid waste container shall be sufficient in number and/or size to store the total volume of refuse produced within the collection period of 2-3 days. It shall be equipped with tight closing and well attached hinged lids to prevent the escape of foul odors and entry of vermin. Container with capacity of more than 38 kilograms (10 gallons) shall be equipped with handles or designed with rollers. It shall be made of non-corrosive lightweight materials and leak proof.

Other accumulation of refuse/solid waste between the collection may be placed in a container of any size and shape that can be easily lifted and handled without spillage by the collector but shall placed only at the designated collection point.

Collection of extraordinary accumulation of bulk of refuse or solid waste shall be placed in appropriate containers acceptable to the collector and the (City/Municipal) Health officer.

Tree trimmings may be placed for collection outside of a container provided such trimmings are secured in bundles of convenient size and weight and do not exceed 1.20 meters in length.

Ashes shall be placed only in plastic, metal or equivalent containers with covers. Other waste materials shall be in sturdy well built containers that will not break, fall apart, rip or tear while being handled by the collector.

Bulk handling and storage of refuse of any character shall be subject to review by the (City/Municipal) Health Officer as recommended by the sanitary engineer/sanitation inspector. The owner and occupant of any residential, industrial, commercial or business establishment shall make such provisions as the (City/Municipal) Health Officer may require

Section 9C.04. Sanitary Requirements for the Transportation of Refuse/Solid Waste.

The following shall be the minimum standard and requirements for the sanitary transportation of refuse.

Transport Vehicle

The vehicle being used, or to be used, for the transportation of refuse shall meet the minimum standard prescribed in this Chapter.

The vehicle shall be owned by, and/or operated under the supervisions of, the person who is the holder of the sanitary permit to transport refuse.

Vehicle Compartments

The vehicle shall be constructed preferably with two compartments, one for biodegradable wastes painted with green color and the other for non-biodegradable wastes painted with black color. In the absence of such type of vehicle, the following options shall be practiced.

- a) separate placement, of refuse within the collection of vehicle, or
- b) separate schedule for collection of refuse.

For vehicle with built-in compactor, only the non-biodegradable wastes shall be compacted and the biodegradable waste hauled in a specially designed compartments.

The special type of waste shall be collected on a separate vehicle with necessary precautions.

Hauling Body

Every vehicle used for the transportation of refuse shall have a hauling body constructed of metal, or shall have a metal lining on floor and all side walls.

All joints in the hauling body shall be effectively closed and smooth so that no dripage or leakage of draining water or liquid or any debris can occur.

Vehicle Covering

Every vehicle shall be provided with a means of covering the refuse to be hauled and keeping such refuse securely within the hauling body.

The hauling shall be provided with any of the following:

- a) tight metal hood having adequate openings fitted with smoothly operating loading and unloading doors, or
- b) heavy tarpaulin or other canvas cover fitted with proper eyes, grommets and tie ropes and hooks whereby the cover can be held securely over the loaded refuse.

Vehicle without permanent cover shall not be loaded with refuse or solid waste to a level above the side wall height.

Maintenance and Cleanliness

- 1) Every vehicle used for refuse/solid waste collection and transport shall be kept well painted, clean and in good condition.
- 2) Every vehicle used for carrying refuse/solid waste shall be washed and applied with disinfectant/deodorizer as often as may be necessary to prevent persistent odors and in any event shall be cleaned at least once a week.
- 3) Every vehicle used for hauling refuse/solid waste shall be cleaned and properly disinfected before being used for any other purpose.
- 4) Provision for wash bay area for vehicles shall be approved by the (City/Municipal) Health Officer.

Markings and Logo

Every vehicle used for transporting of refuse/solid waste shall carry the name, logo, and telephone number of refuse contractor/agency collecting refuse. The letters shall not be less than 10 centimeters (4 inches) in height.

The lettering and logo shall be painted on the sidewall of the hauling body. The color shall be in contrast to the color of the vehicle.

If the vehicle has other uses, the lettering and logo shall be placed on a separate durable metal or wood plaque which shall be firmly fixed to the vehicle when used for refuse collection and transportation.

Loading of Refuse or Solid Waste

- 1) No vehicle shall be loaded with refuse/solid waste in a manner that will permit material to swing off, fall out or jar loose and fall to the ground while in motion.
- 2) Loose paper, trash and small materials shall be secured against any wind dispersal, jiggling, or jarring which will allow such material to be blown or to fall out of the vehicle.

- 3) Whenever vehicles are to be used for the transportation of containers holding garbage, swill, or waste matter, the containers so carried shall meet the requirements for containers under these rules and regulations.

Section 9C.05. Sanitary Requirements for Disposal Areas, Facilities and other Waste Processing Technologies

The following shall be the minimum standards and requirements for the sanitary disposal areas and facilities and other waste processing technologies.

Sanitary Landfill

Operating Permit

No person, natural or juridical, shall establish or operate a garbage disposal area or sanitary landfill without first securing an "Operating Permit" from the Regional Director, DOH thru the (City/Municipal) Health Officer.

Sanitary Permit

No person, natural or juridical, shall establish or operate a garbage disposal area or sanitary landfill without first securing a "sanitary permit" therefor from the (City/Municipal) Health Officer.

Capacity of Disposal Area

The entire disposal area shall be adequate to hold all refuse accepted for the entire period of time during which it is proposed to operate.

The estimates of capacity shall be supported with reliable engineering data.

Dwellings and Habitation

- 1) There shall be no dwelling unit closer than 200 meters to any portion of the premises designated as a landfill area.
- 2) No person shall be permitted to occupy the premises designated as disposal area for living or sleeping purposes, except for the authorized personnel or guards. Authorized personnel shall only use the place for resting purposes while working or guarding the area.

Drainage

- 1) The disposal area shall be free of standing water as much as feasible and practicable.
- 2) No plan for a new disposal area shall be approved where the area is subject to flooding.
- 3) The area shall be provided with sufficient natural or artificial drainage to keep the disposal area free of standing water.

- 4) Drainage from refuse/solid waste disposal shall be handled as sewage and shall be disposed in accordance with the provisions of Chapter XVII – “Sewage Collection and Disposal, Excreta Disposal and Drainage” of the Code on Sanitation of the Philippines (P.D.856) and its implementing rules and regulations.

Accessibility

The disposal area shall be accessible at all times over a hard surfaced roadway.

The access road shall be kept free from all hazards to vehicles or vehicle tires by the landfill operator.

All access roads shall be maintained, paved and kept clean by the landfill operator.

Fire Protection

The property shall be provided with adequate facilities and equipment for controlling and extinguishing fires.

Where no fire water service is available from a public water system, the premises shall be provided with water supply of not less than 32 liters per second at 276 Kpa (500 gallons per minute at a pressure of 40 pounds per square inch).

In addition, one mobile foam type extinguisher or fire truck of a design and capacity approved by the Bureau of Fire Department, DILG shall likewise be provided.

Covering of Refuse/Solid Waste

- 1) All refuse/solid waste shall be covered with fill of earth or other material acceptable to the (City/Municipal) Health Officer within 24 hours upon arrival at the disposal area.
- 2) The thickness and soil type of cover shall be determined by the sanitary engineer on the basis of the character of fill material, but in no event shall the depth of cover less than 15 centimeters (6 inches) soil cover free of cracks and extrusion of refuse.
- 3) Cover materials shall be so placed that settling by weather, rain compaction, or decomposition will not open up cracks or allow extrusions of refuse within one (1) year time.

Equipment

- 1) The disposal area shall have all required or necessary equipment comprised of bulldozer, or clam, or bulls clam, and compactor, or equivalent equipment in sufficient capacity and of such operating quality that the fill can be covered according to schedules required.
- 2) All such equipment shall be kept serviceable.

Recording

- 1) The character and volume of refuse materials to be accepted in the public disposal area shall be listed and posted at the premises entrance or in the premises office which shall be adjacent to the entrance.
- 2) The permit holder shall furnish copy of the list to the (City/Municipal) Health Officer and any other office having jurisdiction over the disposal area.
- 3) The person in charge permanently stationed at the disposal area shall keep a record of the source of material and the estimated volume, or tonnage disposed of every month in such form as may be required by the (City/Municipal) Health Officer or the public/general services department.
- 4) The record shall divide materials received into source such as private individuals, industrial establishment, agricultural, processing plants and local refuse collection service.
- 5) The record shall be available for inspection by authorized personnel of the Department of Health, the local government or other government regulatory offices.

Vermin Control

- 1) A vermin abatement program shall be maintained at all times in the disposal area by the operator.
- 2) All non-biodegradable waste materials when used as filling materials shall be compacted to prevent harborage of vermin.
- 3) No biodegradable waste shall be used as filling materials.

Garbage Grinder

- 1) Domestic garbage grinder shall only be permitted whenever a sewerage system or street sewer is 20 centimeters (8 inches) or larger in diameter and it shall be proportionate to the designed capacity.
- 2) Whenever a garbage grinder is used, the following design for sewerage system shall be followed:
- 3) The requirements for sludge capacity in the septic tank or digester shall be increased at the rate of 0.23 kilogram (0.50 pound) dry solids per capita per day.
- 4) The allowance for the flow capacity shall be increased by 2%; and the allowance for any filter treatment shall recognize a 25% increase in Biochemical Oxygen Demand (B.O.D.) loading.
- 5) Waste generated by the garbage grinder which has not been thoroughly macerated and pulverized to a size passing a #16 (1/16 inch) wire mesh shall not be permitted in a house drainage system.

Recycling

Refuse shall be segregated or sorted for re-use or recycling purposes according to the following:

Factory Returnable.

All non-biodegradable, non-biodegradable, compostable wastes such as tin cans, metal, bottles, glass including broken pieces, plastic, Styrofoam, rubber, dry paper, dry cardboard, dry cloth, fibers, leather, feather, hard shells, hard bones, and other shall be segregated in separate containers, and may be collected and returned to the factory.

Feed Materials.

All food wastes, peelings, vegetrims, fish entrails, fowl innards, spoiled fruits, leftovers, egg shells, rice/fish/meat washings, and other similar kinds shall be collected and kept in covered container and may be used as animal feed.

Fermentables/Fruit Crop Peeling.

Fruit peelings, spoiled or over-ripe fruits, juices and other kinds may be processed into vinegar, wine, “*nata de coco*”, *nata de piña*, or other similar fruit products

Fertilizer Materials.

All compostables or biodegradable materials such as garden waste (leaves, twigs, weeds), animal waste (manure, carcasses), human waste (feces, urine, blood, all excreta, soiled wipes, pads, diapers excluding plastic cover) may be processed into compost for organic gardening.

Filling Materials.

Materials that can be compacted, mixed with rice chaff, and binders may be used for appropriate construction project. Little bits and pieces of plastic bags, synthetic fibers, hair and other materials of similar nature may be used for stuffing toys, furniture, pillows and others.

Food Materials.

Certain kinds of seeds, pulp and peelings may be made into pickles, sweets or candies, or snacks.

Fuel Materials.

Sawdust, wood shavings, rice hull, chaff, husks, cobs, paper, cardboard, fibers and other kinds may be used as fuel materials.

Burying

Burying of refuse/solid waste shall be only for temporary control such as in household and camps.

Only biodegradable solid waste shall be allowed to be buried.

Burying may be practiced within the premises, provided the refuse deposited in the pit shall not be less than 1 meter deep covered with soil to prevent the possible excavation of refuse by dogs, cats and other pet animals. Refuse/solid waste shall not be buried in a flood prone area.

The (City/Municipal) Health Officer is hereby authorized to prohibit burying of refuse/solid waste if he believes it would cause nuisance.

Feeding to Animals

Hog feeding of leftover foods shall be only allowed provided it is thoroughly cooked.

No leftover foods shall be shipped or transferred from one town to another for hog feeding unless first cooked at 100°C for 30 minutes.

Composting

Compost or decaying organic matter/material may be used as a soil conditioner, or when reinforced, as fertilizer.

Open Dumping

Open dumps is hereby prohibited. In the event that open dumping disposal method is existing, strict supervision by the Office of the (City/Municipal) Health Officer shall be observed until after the disposal method is converted to an approved method.

Dumping Into Bodies of Water

Dumping of refuse/solid waste into streams, rivers, lakes esteros and other bodies of water is hereby prohibited.

Open Burning

The outdoor burning of waste and the burning of open waste dumps is hereby prohibited.

Other Waste Processing and Disposal Technologies

Other types or methods of solid waste processing and disposal such as incineration technology, microwave technology, autoclave technology and other kinds shall be subject to compliance with pertinent laws, rules and regulations and standard set by the concerned government agencies.

No waste processing and disposal technologies mentioned above (subsection 7.10.1) shall be allowed without an operating permit issued by the Regional Health Director or his duly authorized representative.

Sanitary permit application and renewal shall be in accordance with these rules and regulations.

Section 9C.06 Sanitary Requirements for Recovered Materials General Requirements

Sorting, picking, recovering or retrieving of refuse/solid waste shall be permitted only under strict supervision of the Office of the (City/Municipal) Health Officer. .

Recovered or retrieved bottles or other articles of glass shall be cleaned and disinfected in a manner prescribed by the Office of the (City/Municipal) Health Officer.

All clothes, rags, bedding, upholstered furniture or any textile of cotton, kapok, wool, plastic, foam or other similar material shall be retrieved only when sanitizing equipment to treat such articles is provided. Such materials shall be sanitized prior to reuse or recycling.

The permit holder shall keep an accurate record by weight, volume, or numerical count, whichever is appropriate, of the articles recovered and the disposition of all these articles. Such record shall be available for inspection by authorized personnel of the Office of the Mayor.

Junk Dealer and Scavengers

Sanitary Permit

No person or entity desiring to engage in the recycling and collection and/or disposal of junk, old, used or second hand material of any kind including rags, clothing, paper, rubbish, bottles, rubber, plastic iron, brass, copper or other metal, furniture, motor parts, or any other article whose condition renders it particularly useless so as to be classified as junk, shall operate without a sanitary permit issued by the (City/Municipal) Health Officer.

Application and renewal of sanitary permit shall be in accordance with the provisions of this Code.

Sanitary permit shall be issued only for the collection of any waste food, damaged food, or condemned or retained food products by junk dealers if it will be used for composting purpose or other approved disposal method, provided the storage (temperature control) shall be in accordance with the rules and regulations prescribed in this Code.

Personnel

Requirements as to health certificate of junk dealers, scavenger and other workers shall be in accordance with these rules and regulations.

Other Requirements

Junk dealers shall have premises and shelter approved by the (City/Municipal) Health Officer.

All clothings, rags, textiles of cotton, hair, felt, leather, rubber, kapok or wooden or other similar materials shall be kept in a clean dry place, free from mildew, fungal growth and other damaging elements.

All materials kept or stored on or in the premises shall be piled, stacked, placed in bins, lockers, or containers in such manner that no portion of the premises can be or is likely to be harborage or place of vermin infestation.

Aisle of not less than 1.20 meters in width shall be provided and maintained clear and unobstructed so that the entire premises can be inspected.

If the establishment is not entirely enclosed in a building, the exterior premises shall be enclosed by tight fence of wood or other materials approved by the (city/municipal) building official. Tight shall mean that no article within the premises may pass surreptitiously or otherwise through the fence.

All secondhand glassware, bottles or any other container which is intended to be used for holding food and drinks shall be cleaned and disinfected when such material is brought to the premises, or before such material is mixed with clean articles on the premises.

Cleaning and disinfecting shall be in accordance with the standard provisions of Chapter III - "Food Establishments" of the Code on Sanitation of the Philippine and its implementing rules and regulations.

Storage of all clean articles shall be in such a way as to keep them clean until sold or disposed of.

Every article of upholstery, furniture containing hair, cloth, felt, kapok, rags, clothes and all such articles of similar character shall be sanitized before being placed with disinfected or sanitized articles, or before being offered to any person.

All sanitary conveniences, facilities, water supply, lighting, ventilation and other such requirements shall be in accordance with the provisions of Chapter VII – "Industrial Hygiene" of the Code on Sanitation of the Philippines (P.D.856) and its implementing rules and regulations.

Food Waste Retrieval Operator

Sanitary permit and personnel requirements shall be in accordance with the provisions of this Code.

The existing standard of the Department of Health with regard to food preservation shall be applied therewith. Food waste products failing to meet such requirements shall not be retrieved for sale as food for human consumption or for use in the preparation of such food.

No person who is the owner or custodian of any animal or fowl, livestock or game animal or fowl that died other than by slaughter for food shall sell it as food for human consumption.

The retrieval operation shall be in accordance with the food handling provisions of Chapter III – "Food Establishments" of the Code on Sanitation of the Philippines and its implementing rules and regulations.

Non-retrievable food shall be disposed of in a manner approved by the (City/Municipal) Health Officer concerned.

Non-retrievable food may be safely fed to animals or fowl. Provided, such feeding shall be permitted by the (City/Municipal) Health Officer as a method of disposal of the material.

Section 9C.07. *Specific Requirements for Biomedical Waste Management.* The management of biomedical waste produced by health care institution and other similar

establishment shall be based on the standard and guidelines contained in the Manual on Hospital Waste Management prepared by the Department of Health.

Section 9C.08. Responsibility of Owner or Occupant of Buildings, Family Dwelling Units and Premises

- 1) It shall be the duty of every person, occupant, owner, permit holder, tenant or lessee of any residential, industrial, commercial and business establishment, institution or open spaces, like park, camps and picnic grounds producing refuse to:
 - a) Maintain their premises, facilities or equipment clean;
 - b) Provide and maintain appropriate and sufficient number and size of containers to handle the accumulation of refuse on the building, family dwelling unit or premises during the interval period of collection;
 - c) Keep containers in a designated place;
 - d) Refrain from placing refuse in street, alley, sidewalk, footpath, or any place whatsoever except for the period of time immediately prior to collection;
 - e) Dispose refuse in designated containers provided for the purpose when in public places;
 - f) Prevent and control harborage of vermin; and
 - g) Provide odor or nuisance control problem.
- 2) Every person occupant, owner, permit holder, tenant or lessee shall prevent the:
 - a) removal of any refuse/solid waste placed in container by unauthorized persons;
 - b) storing, depositing or keeping of refuse/solid waste in any place or in any manner where vermin can have access to or feed thereon, or can use such refuse as a harborage, nest or breeding place;
 - c) placing of refuse/solid waste in low areas and low lots without filling, leveling and covering it, thus creating unsanitary condition or nuisance.
 - d) burning of refuse/solid waste thereby causing excessive smoke, liberating toxic substance of combustion. Or producing noxious odor likely to affect the occupants of neighboring premises.
 - e) burying of garbage or swill in areas not designated for refuse disposal;
 - f) picking over, sorting, segregating or salvaging of any refuse/solid waste without the necessary operating permit as junk dealer or food salvage operator;
 - g) feeding of animals with uncooked or viscera obtained from slaughterhouse, poultry killing house or fish market; and
 - h) throwing or depositing of any refuse/solid waste in any sewer manhole or storm water catch basin, bodies of water or *esteros*.

- 3) It shall be the responsibility of every occupant or owner of building, family dwelling unit or premises lining the street to keep it clean and free from refuse/solid waste from the line of the property to the middle of the street and from one property to the other.

Section 9C.09. *Responsibility of Owners of Idle or Vacant Lots*

It shall be the responsibility of the owners of idle or vacant lots to keep their lots clean to protect them from becoming the breeding places of vermin. In the event of their failure or inability to comply with this obligation, the (city/municipal) government shall undertake the cleaning of said lots at the expense of its owners.

Section 9C.10. *Responsibility of the Refuse Collector*

The refuse collector shall:

- 1) Provide a refuse collection services for residential areas at least twice a week;
- 2) Provide daily collection service of putrescible wastes produced by public markets, food establishments, health care institution, schools, public places and other congested/urban areas.
- 3) Transfer the contents of all container into the vehicle provided thereof, without spilling any refuse on stairs, walks, yards or streets;
- 4) Clean all refuse spilled during the collection and completely empty the containers and replace the lids;
- 5) Use every precaution while collecting refuse at night or in the early morning to prevent unnecessary noises;
- 6) Return container/cans to their proper location or designated places without damage after refuse collection;
- 7) Use personal protective equipment while conducting collection services;
- 8) Clean immediately oneself after working;
- 9) Submit information, records and periodic reports as may be required by the (City/Municipal) Health officer for the purpose of evaluating the compliance with these rules and regulations; and
- 10) Abide with the provisions of these rules and regulations.

Section 9C.11. *Responsibility of the (City/Municipal) Health Officer.*

The (City/Municipal) Health Officer shall:

- 1) Conduct or cause the conduct of regular inspection and visits to any place or premises wherein refuse may accumulate and to all refuse collection, transportation and disposal sites, locations, equipment and premises for the purpose of ascertaining the status of compliance with the requirements of these rules and regulations;

- 2) Issue sanitary permit after a complete investigation of the premises, equipment, plan of operation, schedules of collection, places of disposal, and other pertinent information indicative of the ability to comply with all standards and requirements of this Code;
- 3) Conduct constant dialogue with the holder of the sanitary permit for the purpose of discussing the terms and conditions deemed necessary to assure compliance with these rules and regulations;
- 4) Recommend to the (City/Municipal) Mayor the withholding, suspension or revocation of the “Mayor’s Permit” for violation of the provisions of these rules and regulations;
- 5) Inform all concerned agencies/organization regarding these implementing rules and regulations; and
- 6) Enforce the provisions of these rules and regulations.

Article D. Sewage Disposal

Section 9D.01. Rules and Regulations

Sewage Disposal

- 1) All sewage discharged from food establishments shall be disposed in a public sewerage system, or in the absence thereof, in a manner complying with the General Provisions on Waste Disposal of Department of Health Circular No. 220, s.1974 implementing the provisions of Presidential Decree No. 522, and Chapter XVII of P.D. 856 and its implementing rules and regulations.
- 2) A grease trap shall be used and where practicable be placed outside the food establishment.

Refuse Collection, Separation, Storage and Disposal

- 1) Refuse cans may be used in food preparation areas for immediate use only. All garbage and rubbish containing food waste shall be kept in containers, constructed of impervious materials which are leak-proof and do not absorb liquids.
- 2) All containers shall be provided with tight-fitting, lids or covers, so constructed and maintained as to be vermin-proofed and easily cleansed. The containers or cans shall be lined with plastic trash bags to prevent food sticking directly into the containers and to facilitate easy disposal, tightly covered at all times, except during actual use in food preparation area.
- 3) After being emptied, each container shall be thoroughly cleaned inside and outside with soap and brush. Washing shall be done in a place and manner so as not to contaminate food, equipment, utensils, or food preparation areas. Brushes for washing garbage containers shall be used for no other purposes.

- 4) There shall be sufficient number of containers to hold all of the garbage and rubbish which are accumulated between periods of removal from the premises.

Segregation/Separation

Refuse shall be separated as follows:

- 1) Recyclables - these include dry papers, cardboards, plastics, rubbers, glasses, broken bottles, metals and minerals.
- 2) Trashes - are ashes, rice hulls, chaffs, husks, shells, cobs, papers, cardboards.
- 3) Food Materials -are food leftovers, kitchen/cooking wastes, food washings, vegetable trimmings, fruit peelings, egg shell, bones, entrails and gills.

Storage

- 1) Refuse receptacles containing food waste shall be stored so as to be inaccessible to vermin. If this is not possible, containers or cans shall be stored in a manner so as not to create a potential insect and rodent attractant, harborage and nuisance.
- 2) Refuse storage room or enclosure maybe constructed and is shall be easily cleanable, washable materials and vermin proof. The floors and the walls shall be of relatively non-absorbent materials. Refuse containers or cans outside the food establishment shall be stored either on concrete slab at sufficient distance above the ground to facilitate cleaning of the storage area.
- 3) Holding bins may likewise be used, provided they are constructed of impervious, readily-cleaned materials and fitted with tight-fitting cover.
- 4) Storage refuse cans, filled and empty, shall be in a designated space separate from food handling operations.
- 5) Where refuse cans are used, a space separate from the food preparation space and adjacent to the refuse-can storage space shall be provided for cleaning. This space shall be equipped with scrubbing brush, cleansing agents, steam or hot water under pressure, and a hose fitted with adjustable nozzle.
- 6) Storage areas shall be maintained clean at all times.

Disposal

- 1) All garbage, rubbish and other refuse shall be disposed off at least once a day, or at such frequencies through a City or city or private collection system or by any approved method, and in such a manner as to prevent nuisance.
- 2) Open burning of refuse shall is hereby prohibited.

Article E. Administrative Provisions

Section 9E.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the agencies of the government concerned shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 9E.02. Penalty. Any person who violates any provision under this Chapter shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER X
PROTECTION AND MANAGEMENT OF CAVES AND CAVE RESOURCES**

Article A. General Information

Section 10A.01. Declaration of Policy. It is hereby declared as the policy of the provincial government to conserve, protect and manage caves and cave resources as part of this province's natural wealth. Towards this end, the provincial government shall strengthen cooperation and exchange of information among governmental authorities and people who utilize caves and cave resources for scientific, educational recreational, tourism and for other purposes.

Section 10A.02. Definition of Terms. As used in this Article the term:

Cave - means any naturally occurring void, cavity, recess or system of interconnected passages beneath the surface of the earth or within a cliff or ledge and which is large enough to permit an individual to enter, whether or not the entrance, located either in private or public land, is naturally formed or man-made. It shall include any natural pit, sinkhole or other feature which is an extension of the entrance. The term also includes cave resources therein, but not any yug, mine, tunnel, aqueduct or other man-made excavation.

Cave resources - includes any material or substance occurring naturally in caves, such as animal life, plant life, including paleontological and archeological deposits, cultural artifacts or products of human activities, sediments, minerals, speleogems and speleothems.

Speleogem - means relief features on the walls, ceilings and floor of any cave or lava tube which are part of the surrounding bedrock, including but not limited to anastomoses, scallops, meander niches, petromorphs and rock pendants in solution caves and similar features unique to volcanic caves.

Speleothem - means any natural mineral formation or deposit occurring in a cave or lava tube, including but not limited to any stalactite, stalagmite, helictite, cave flower, flowstone, concretion, drapery, rimstone or formation of clay or mud.

Significant cave - refers to a cave which contains materials or possesses features that have archeological, cultural, ecological, historical or scientific value as determined by the DENR in coordination with the scientific community and the academe. (RA 9072).

Article B. Protection and Conservation of Natural Caves

Section 10B.01. *Regulated Acts.* No person, natural or juridical, shall destroy, disturb, deface, mar, alter, remove, or harm the speleogem or speleothem of any natural cave or altering the free movement of any animal or plant life into or out of any natural cave within the jurisdiction of this province.

Article C. Protection and Conservation of Cave Resources

Section 10C.01. *Regulated Acts.* No person, natural, or juridical shall gather, collect, possess, consume, sell, barter or exchange or offer for sale any cave resources without a permit therefor from the duly authorized representative of the DENR and the city/municipal mayor concerned.

Article D. Administrative Provisions

Section 10D.01. *Issuance of Implementing Guidelines.* The Provincial Governor, or his duly authorized representative, in coordination with the DENR and other government agency concerned shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 10D.02. *Penalty.* Any person who violates any provision under this Article shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER XI
PROTECTION AND MANAGEMENT OF MINES RESOURCES**

Article A. Gold Panning or Sluicing

Section 11A.01. *Regulated Acts.* No person, natural or juridical, shall undertake any activity related to extraction of gold thru panning or sluicing of loose sediments from creeks, streams or rivers inside mining claims, and from private or public lands without a permit therefore from the duly authorized representative of the Bureau of Mines and the city/municipal mayor concerned.

Section 11A.02. *Definitions.* As used in this Article, the term:

Claim owner - shall mean a holder of valid and subsisting mining claim(s).

Sluice box - refers to rectangular, wooden launder provided with side walls and cross pieces of sawn lumber or round poles, metallic screen jute cloth or a combination of both, on its floor to retain gold.

Panning - shall mean recovering gold by the use of open round wooden or metal containers disphan-like in appearance by skillful manipulation with hands.

Sluicing - shall mean recovering gold by the use of sluice boxes.

Section 11A.03. *Rules and Regulations.*

- 1) No permit for panning or sluicing shall be issued unless the claim owner or landowner or government agency concerned shall have consented in writing to such panning or sluicing provided, however, that if the mining claim or claims are covered by an operating agreement, the consent shall be given by the operator.

- 2) It shall be unlawful to employ minors in any panning or sluicing operation, or to conduct such operations during nighttime.
- 3) The activities to be permitted shall be limited to panning by hand or sluicing by the use of sluice boxes. No drilling, blasting, crushing or grinding by machineries or similar activities shall be allowed. The claim owner or operator, landowner or government agency concerned shall not be responsible in any manner whatsoever for damages, injuries or deaths arising out of or resulting from such operations.
- 4) All recovered or extracted gold in any form from panning or sluicing as authorized shall be sold only to authorized dealers of the Central Bank of the Philippines. Provided, That the mining operator, claim owner, or landowner in that order shall have the preference to buy the gold recovered from their properties: Provided, further, That authorized buyers shall retain 11-1/2% of the gross value of the gold bought, 1-1/2% to accrue as ad valorem tax and 10% as royalty to the claim owner, landowner or government agency concerned, as the case may be: Provided, finally, That if the mining claim or claims are covered by an agreement, the 10% royalty, except when there is an agreement to the contrary, shall be divided equally between the claim owner and the operator.
- 5) No person shall engage in the business of buying and selling gold without securing a permit therefore from the city or municipal mayor of the place where his principal office is located. He shall keep complete and accurate records of all his transactions such as the names and addresses of the persons he deals with, the quantity of gold bought or sold, the consideration paid or received, and the date of each transaction.

Article B. Small Scale Mining

Section 11B.01. Declaration of Policy. It is hereby declared a policy of the provincial government to promote, develop, protect and rationalize viable small-scale mining activities in order to generate more employment opportunities and provide an equitable sharing of the nation's wealth and natural resources, giving due regard to existing rights as herein provided.

Section 11B.02. Definitions. As used in this Article the term:

Mineralized areas - refer to areas with naturally occurring mineral deposits of gold, silver, chromite, kaolin, silica, marble, gravel, clay and like mineral resources;

Small-scale mining - refers to mining activities which rely heavily on manual labor using simple implement and methods and do not use explosives or heavy mining equipment;

Small-scale miners - refer to Filipino citizens who, individually or in the company of other Filipino citizens, voluntarily form a cooperative duly licensed by the Department of Environment and Natural Resources to engage, under the terms and conditions of a contract, in the extraction or removal of minerals or ore-bearing materials from the ground;

Small-scale mining contract - refers to co-production, joint venture or mineral production sharing agreement between the State and a small-scale mining contractor for the small-scale utilization of a plot of mineral land;

Small-scale mining contractor - refers to an individual or a cooperative of small-scale miners, registered with the Securities and Exchange Commission or other appropriate government agency, which has entered into an agreement with the State for the small-scale utilization of a plot of mineral land within a people's small-scale mining area;

Active mining area - refers to areas under actual exploration, development, exploitation or commercial production as determined by the Secretary after the necessary field investigation or verification including contiguous and geologically related areas belonging to the same claimowner and/or under contract with an operator, but in no case to exceed the maximum area allowed by law;

Existing mining right - refers to perfected and subsisting claim, lease, license or permit covering a mineralized area prior to its declaration as a people's small-scale mining area;

Claimowner - refers to a holder of an existing mining right;

Processor - refers to a person issued a license to engage in the treatment of minerals or ore-bearing materials such as by gravity concentration, leaching beneficiation, cyanidation, cutting, sizing, polishing and other similar activities;

License - refers to the privilege granted to a person to legitimately pursue his occupation as a small-scale miner or processor.

Mining plan - refers to a two-year program of activities and methodologies employed in the extraction and production of minerals or ore-bearing materials, including the financial plan and other resources in support thereof;

Section 11B.03. Creation of the Provincial Mining Regulatory Board. Pursuant to the provisions of Section 24, RA 7076 there is hereby created a Provincial Mining Regulatory Board to be composed of the following:

DENR representative as Chairman;

Representative of the provincial governor,

One (1) small scale mining representative,

One (1) big-scale mining representative, and

Representative from a non-government organization (NGO) who shall come from an environmental group, as members.

The representatives from the private sector shall be nominated by their respective organizations and appointed by the DENR regional director.

Section 11B.04. Powers, Duties and Functions of the Provincial Mining Regulatory Board. As the implementing agency of the DENR, the PMRB shall exercise the following powers, duties and functions:

- (a) Declare and segregate existing gold-rush areas for small-scale mining;
- (b) Reserve future gold and other mining areas for small-scale mining;
- (c) Award contracts to small-scale miners;
- (d) Formulate and implement rules and regulations related to small-scale mining;
- (e) Settle disputes, conflicts or litigations over conflicting claims within a people's small-scale mining area, an area that is declared a small-mining; and

- (f) Perform such other functions as may be necessary to achieve the goals and objectives of RA 7076.

Section 11B.05. *Future People's Small-scale Mining Areas.* Pursuant to Section 6 of RA 7076 the following lands, when suitable for small-scale mining, may be declared by the Provincial Mining Regulatory Board as people's small scale mining areas:

- (a) Public lands not subject to any existing right;
- (b) Public lands covered by existing mining rights which are not active mining areas; and
- (c) Private lands, subject to certain rights and conditions, except those with substantial improvements or in bona fide and regular use as a yard, stockyard, garden, plant nursery, plantation, cemetery or burial site, or land situated within one hundred meters (100 m.) from such cemetery or burial site, water reservoir or a separate parcel of land with an area of ten thousand square meters (10,000 sq. m.) or less.

Section 11B.06. *Rules and Regulations.*

1. **Ancestral Lands.** No ancestral land may be declared as a people's small-scale mining area without the prior consent of the cultural communities concerned: provided, that, if ancestral lands are declared as people's small-scale mining areas, the members of the cultural communities therein shall be given priority in the awarding of small-scale mining contracts.
2. **Registration of Small-scale Miners.** All persons undertaking small-scale mining activities shall register as miners with the Provincial Mining Regulatory Board and may organize themselves into cooperatives in order to qualify for the awarding of a people's small-scale mining contract.
3. **Award of People's Small-scale Mining Contracts.** A people's small-scale mining contract may be awarded by the Provincial Mining Regulatory Board to small-scale miners who have voluntarily organized and have duly registered with the appropriate government agency as an individual miner or cooperative; Provided, That only one (1) people's small-scale mining contract may be awarded at any one time to a small-scale mining operations within one (1) year from the date of award:

Applications for a contract shall be subject to a reasonable fee to be paid to the Department of Environment and Natural Resources regional office having jurisdiction over the area.

4. **Extent of Contract Area.** The Provincial Mining Regulatory Board shall determine the reasonable size and shape of the contract area following the meridional block system established under Presidential Decree No. 463, as amended, otherwise known as the Mineral Resources Development Decree of 1974, but in no case shall the area exceed twenty hectares (20 has.) per contractor and the depth or length of the tunnel or adit not exceeding that recommended by the director taking into account the following circumstances:
 - (a) Size of membership and capitalization of the cooperative;
 - (b) Size of mineralized area;

- (c) Quantity of mineral deposits;
 - (d) Safety of miners;
 - (e) Environmental impact and other considerations; and
 - (f) Other related circumstances.
5. **Easement Rights.** Upon the declaration of a people's small-scale mining area, the director, in consultation with the operator, claimowner, landowner or lessor of an affected area, shall determine the right of the small scale miners to existing facilities such as mining and logging roads, private roads, port and communication facilities, processing plants which are necessary for the effective implementation of the People's Small-scale Mining Program, subject to payment of reasonable fees to the operator, claimowner, landowner or lessor.
6. **Rights Under a People's Small-scale Mining Contract.** A people's small-scale mining contract entitles the small-scale mining contractor to the right to mine, extract and dispose of mineral ores for commercial purposes. In no case shall a small-scale mining contract be subcontracted, assigned or otherwise transferred.
7. **Terms and Conditions of the Contract.** A contract shall have a term of two (2) years, renewable subject to verification by the Board for like periods as long as the contractor complies with the provisions set forth in this Act, and confers upon the contractor the right to mine within the contract area: Provided, That the holder of a small-scale mining contract shall have the following duties and obligations:
- a) Undertake mining activities only in accordance with a mining plan duly approved by the Board;
 - b) Abide by the Mines and Geosciences Bureau and the small-scale Mining Safety Rules and Regulations;
 - c) Comply with his obligations to the holder of an existing mining right;
 - d) Pay all taxes, royalties or government production share as are now or may hereafter be provided by law;
 - e) Comply with pertinent rules and regulations on environmental protection and conservation, particularly those on tree-cutting mineral-processing and pollution control;
 - f) File under oath at the end of each month a detailed production and financial report to the Board; and
 - g) Assume responsibility for the safety of persons working in the mines.
8. **Rights of Claimowners.** In case a site declared and set aside as a people's-scale mining area is covered by an existing mining right, the claimowner and the small-scale miners therein are encouraged to enter into a voluntary and acceptable contractual agreement with respect to the small-scale utilization of the mineral values from the area under claim. In case of disagreement, the claimowner shall be entitled to the following rights and privileges:

- (a) Exemption from the performance of annual work obligations and payment of occupation fees, rental, and real property taxes;
- (b) Subject to the approval of the Board, free access to the contract area to conduct metallurgical tests, explorations and other activities, provided such activities do not unduly interfere with the operations of the small-scale miners; and
- (c) Royalty equivalent to one and one half percent (1 1/2%) of the gross value of the metallic mineral output or one percent (1%) of the gross value of the nonmetallic mineral output to be paid to the claimowner:

9. **Rights of Private Landowners.** The private landowner or lawful possessor shall be notified of any plan or petition to declare his land as a people's small-scale mining area. Said landowner may oppose such plan or petition in an appropriate proceeding and hearing conducted before the Board.

If a private land is declared as a people's small-scale mining area, the owner and the small-scale mining contractors are encouraged to enter into a voluntary and acceptable contractual agreement for the small-scale utilization of the mineral values from the private land: Provided, That the owner shall in all cases be entitled to the payment of actual damages which he may suffer as a result of such declaration: Provided, further, That royalties paid to the owner shall in no case exceed one percent (1%) of the gross value of the minerals recovered as royalty.

10. **Ownership of Mill Tailings.** The small-scale mining contractor shall be the owner of all mill tailings produced from the contract area. He may sell the tailings or have them processed in any custom mill in the area: Provided, that, if the small-scale mining contractor decide to sell its mill tailings, the claimowner shall have a preemptive right to purchase said mill tailings at the prevailing market price.
11. **Sale of Gold.** All gold produced by small-scale miners in any mineral area shall be sold to the Central Bank, or its duly authorized representatives, which shall buy it at prices competitive with those prevailing in the world market regardless of volume or weight.
12. **Custom Mills.** The establishment and operation of safe and efficient customs mills to process minerals or ore-bearing materials shall be limited to mineral processing zones duly designated by the local government unit concerned upon recommendation of the Board.

The Provincial Mining Regulatory Board shall issue licenses for the operation of custom mills and other processing plants subject to pollution control and safety standards.

13. **Rescission of Contracts and Administrative Fines.** The noncompliance with the terms and conditions of the contract or violation of the rules and regulations issued by the DENR as well as the abandonment of the mining site by the contractor, shall constitute a ground for the cancellation of the contracts and the ejection from the people's small-scale mining area of the contractor.
14. **Reversion of People's Small-scale Mining Areas.** The DENR, upon recommendation of the Regional Director, shall withdraw the status of the people's small-scale mining area when it can no longer be feasibly operated on a small-scale

mining basis or when the safety, health and environmental conditions warrant that the same shall revert to the State for proper disposition.

Article D. Administrative Provisions

Section 11D.01. Issuance of Implementing Guidelines. The Provincial Governor, or his duly authorized representative, in coordination with the DENR and other government agency concerned shall issue the necessary implementing guidelines or rules and regulations for the proper enforcement of this Chapter.

Section 11D.02. Penalty. Any person who violates any provision under this Article shall be punished by a fine of not more than Five Thousand Pesos (P5,000.00) or imprisonment of not more than One (1) year, or both such fine and imprisonment, at the discretion of the Court.

**CHAPTER XII
MISCELLANEOUS ENVIRONMENTAL STANDARDS IN MINING OPERATIONS**

Article A. Purpose and Scope

Section 12A.01. Purpose. This Chapter aims:

1. To promote a culture of safety and health;
2. To provide for the strict enforcement of safety and health measures;
3. To provide for effective monitoring systems, inspections, investigations and inquiries to improve health and safety;
4. To establish tripartite linkages in promoting safety and health matters;
5. To comply with the international law obligations of the government relating to mine safety and health.

Section 12A.02. Scope. This Chapter shall govern all employers, employees, contractors, permittees, service contractors and other entities engaged in any exploration, mining, quarrying, mineral processing, and r allied or related operations.

Section 12A.03. Definitions of Technical Terms. As used in this Chapter, the definitions of technical terms are as follows:

Bureau - refers to the “Mines and Geosciences Bureau”;

Director - the Director of Mines and Geosciences Bureau;

Accident - an undesired event in which, the contact, the exposure or the movement of a person to objects, equipment, machineries, substances, conditions or other persons may or may not cause personal injury, damage to property and delay.

Accident Frequency Rate - the total fatal and non-fatal lost-time accidents per million manhours worked, and may be expressed in the following formula:

$$\text{Frequency Rate} = \frac{\text{No. of Lost - Time Accident} \times 1,000,000}{\text{Manhours Worked}}$$

Accident Severity Rate - the days lost per million manhours worked and may be expressed in the following formula :

$$\text{Severity Rate} = \frac{\text{No. of Days Lost} \times 1,000,000}{\text{MANHOURS WORKED}}$$

Authorized Nuclear Device Operators - inducted, trained and qualified to use and operate the nuclear device as defined under the code of Philippine Nuclear Research Institute (PNRI) Regulations

Blaster - a person who is a holder of a valid Blaster's Foreman license issued by the Philippine National Police upon the proper endorsement of the Bureau.

Blasting Area - the area where actual blasting operations will be conducted including the vicinity in which concussions and/or flying material can be reasonably be expected to cause injury or property damage.

Contractor - a perfected mining rights holder.

Decommissioning - a process in which the mine facility is placed in a safe and environmentally acceptable condition prior to cessation of mining operation.

Detonator - device used for detonating an explosive; like ordinary, electric, non-electric blasting caps, exploders, percussion caps, primers, electric detonators.

Dose Limits - amount of exposure to radiation in excess of As Low As Reasonably Achievable (ALARA) or CPR Part 3 limits.

Dredge - any floating vessel used for mining operations consisting of digging, cutting, excavating or raising (whether by mechanical, hydraulic or pneumatic means) any rock, metal, mineral or mineral substance including sand and gravel from below the surface of a body of water and the purpose of treating or otherwise dealing with any rock and minerals which have been dug, cut, excavated or raised above water.

Electrical Installations - include but not limited to electrical supply equipment, electrical utilization equipment, electric generating plant, electric supply line and substation.

Electrical Supply Equipment - any equipment which produces, modifies, regulates controls or safeguards the supply of electric energy.

Employee - any person hired, permitted or allowed to work by an employer.

Employer – includes any person or entity acting directly or indirectly in the interest of an employer, in relation to an employee.

Excavation or Workings - any or all parts of an active or inactive mine including shafts, tunnels, drifts, crosscuts and raises.

Explosive - any chemical compound or mechanical mixture, which by fire, friction, concussions, percussion or detonation, may cause a sudden release of gases having pressure capable of producing destructive effects.

Hot Material – a material having temperature exceeding 57° C.

Inhabited Building – A building regularly occupied in whole or in part as a habitation for human beings, or any workplace, church, schoolhouse, railroad station, stores or other structures where people are accustomed to assemble, except any building or structure occupied in connection with the manufacture, transportation, storage or use of explosives.

Imminent Danger- a condition or practice that could reasonably be expected to cause death or serious physical injury or damage to property prior to the adoption of appropriate measures to counter the risk.

Leaching - process of dissolving the valuable minerals from an ore or concentrate feed and extracting the metal(s) of interest into the solution.

Leachants - chemicals/reagents used in dissolving minerals or metals.

Liquefied Petroleum Gas - the gas liquefied by compression consisting of flammable hydro-carbons, such as propane, butane, obtained as a by product from refining petroleum or from natural gas; used chiefly as domestic fuel; industrial and motor fuel).

Lost-Time Accident - those that will prevent the injured from reporting to work on the working day following the day of injury and thereafter. Also to be considered as lost-time accident is when the injured person, after reporting to work on the working day following the day of injury, fails to continue his normal work due to complications and accident resulting to permanent injuries or disabilities. Counting of days lost shall start from the time the injured person fails to report for work.

Lost-Time Accident, Fatal – lost time accident that results in the death of the injured person.

Lost-Time Accident, Non-Fatal – any injury which does not result in death or permanent total or permanent partial disability but which results in disability from work for a day or more.

Magazine - any building or structure other than explosive manufacturing building used for the storage of explosives and blasting accessories. There are three (3) types of magazines.

- a. The Permanent Storage Magazine where a large quantity of explosive is kept.
- b. The Issuing Magazine where a small or moderate quantity of explosive is kept.
- c. Portable Magazine an approved steel container used to store explosives for a short period of time.

Manager - the person responsible for the overall direction, control and supervision of the entire operation.

Material Safety Data Sheet (MSDS) – The document that describes the identity of a substance which includes among others company product information, composition information on ingredients, hazard identification and control and clean-up procedures in cases of accidental spill.

Mechanical Equipment, Machinery or Process - steam engines, internal combustion engines, boilers, turbines, crushers, mills, mixers, pumps, compressors, cranes, conveyors, hoists, elevators, pipe lines, line-shifting or the like, but shall not include motor vehicles, street cars, locomotives, steamships, motor ships, airplanes and similar machinery used as means of transportation.

Mechanical Works, Plant - steam plants, internal combustion engine plants, power plants, pumping plants, refrigerating plants, mill shops, factories, foundries, heat generating plants, chemicals or other prime movers.

Mines - include all excavations or workings for the purpose of searching for or finding minerals as well as the workings of mineral deposits, whether abandoned or actually being worked on the surface or underground, together with all buildings, premises, installations, and appliances belonging or appertaining thereto.

Mining Operations - any mining activity involving exploration, development and utilization.

Non-Lost Time Accident - those that will not prevent the injured person from reporting to his designated work on the working day following the day of injury and thereafter.

Occupational Health Practitioner - refers to a physician, nurse, engineer, dentist or chemist and other qualified health professional duly licensed to practice his/her profession in the Philippines and possessing all of the additional qualifications required by the Department of Health.

Part-time Safety Engineer – shall be allotted at least four (4) hours per week to perform the duties as safety engineer and a holder of a safety engineer's permit issued by the concerned Regional Office.

Plant - include mineral processing plant, beneficiating plant, foundry shop, cement plant, laboratory, office building and the like.

Primed Cartridge - an explosive cartridge to which a detonator has been attached.

Producing Mine - any mine involved in the utilization of mineral deposit/s.

Radiological Safety and Health Officer - A person authorized by the Philippine Nuclear Research Institute to manage a radiation safety program.

Service Contractor - any person or entity that has a contract for a specific job to undertake any services with a mining contractor, permittee or his duly authorized representative.

Service Contract Worker - any person who works for a service contractor.

Surface Working - a mine working or excavation other than underground.

Supervisor - any person to whom the employer has delegated authority and responsibility for the direction and control of workmen.

Trackless Unit - any vehicle, drill rigs, trackless load, haul dump unit or service unit which is powered by a diesel, compressed or electric motor; used for loading, hauling, grading, drilling or services functions and not mounted on rail.

Traffic Control - patrol vehicles, traffic lights, signs, barricades, detours, flagmen, or other techniques and device used to regulate movement of vehicles according to prevailing circumstances.

Underground Working - a mine working or excavation beneath the surface of the ground.

Workshop - pertains to machines, foundry, electrical, fabrication, repair, carpentry and overhauling shops; motorpool; and other similar shops.

Article B. Rules and Regulations on Mining Operations

Section 12B.01. Restatement and Adoption of the Rules and Regulations promulgated by the Department of Environment and Natural Resources (DENR). The rules and regulations promulgated by the Department of Environment and Natural Resources under Administrative Order No. 2000-98 are hereby restated, adopted and made an integral part of this Chapter, viz:

ACCIDENT AND ILLNESSES

Rule 1. A record shall be kept of all occupational accidents and illnesses occurring in a mine in a form prescribed by the Bureau of Mines.

Rule 2. Whenever an accident occurs in a mine resulting to the death of, or in serious physical injury to one or more persons, the employer or his duly authorized representative shall within twenty-four (24) hours, immediately by the quickest means available, give notice thereof, to the Director, Regional Director, or their duly authorized representative/s. Detailed report shall be submitted to the Director or Regional Director or his duly authorized representative within fifteen (15) days after notice of knowledge by the employer of the accident.

Rule 3. When any physical injury results in the death of the person injured, and health threatening occurrences the employer or his duly authorized representative must give notice thereof to the Director, Regional Director or their duly authorized representatives without delay.

Rule 4. For the purpose of any injury or inspection related to safety, health and sanitation, the Director or the Regional Director or their duly authorized representative;

Can require the employer during reasonable business hours to produce any document related to the accident.

Can require the employer to present any of his employees to be investigated or examined to make and sign under oath a declaration made by him in his examination.

Rule 5. Monthly employers report of accident or sickness including damage to property shall be submitted within fifteen (15) days after every calendar month to the Regional Director and Director copy furnish the Department of Labor and Employment – Bureau of Working Conditions (DOLE-BWC).

Rule 6. Monthly statistical data on Accident shall be accomplished and submitted within the first fifteen (15) days after every calendar month to the Regional Director and Director, copy furnish the Department of Labor and Employment – Bureau of Working Conditions (DOLE-BWC).

CLASSIFICATION OF MINES AND SERVICE CONTRACTORS

Rule 7. For purposes of this Order, Mines or Service Contractors shall be classified as follows:

Class "A" - Those underground and surface mines/service contractor employing a total of not less than one hundred fifty (150) and two hundred fifty (250) employees, respectively.

Class "B" - Those underground and surface mines/service contractor employing a total of not less than fifty (50) and seventy-five (75) employees, respectively, to not more than one hundred fifty (150) and two hundred fifty (250) employees, respectively.

Class "C" - Those underground and surface mines/service contractor employing a total of not less than twenty five (25) employees and not more than fifty (50) employees, respectively, to not more than fifty (50) and seventy-five (75) employees, respectively.

Class "D" - Those underground and surface mines/service contractor, employing a total of not more than twenty five (25) and fifty (50) personnel respectively.

Rule 8. Class "A" mines and service contractors shall have at least one full time Safety Engineer and one full time Safety Inspector: Provided, that those underground and surface mines employing more than one hundred fifty (150) and two hundred fifty (250) employees, respectively, shall have additional safety engineers, safety inspectors and/or deputized safety inspector as required by the Bureau to have all active working places visited at least once every shift.

Rule 9. Class "B" mines and service contractors shall have at least one (1) full time Safety Engineer and one (1) full time Safety Inspector. Provided, that the same shall have additional safety engineer/inspector as required by the Bureau to have all active workplaces visited at least once every shift.

Rule 10. Class "C" mines and service contractors shall have at least one (1) part-time Safety Engineer, one (1) full time Safety Inspector and a deputy safety inspector. Provided, that the same shall have additional safety engineer/inspector as required by the Bureau to have all active workplaces visited at least once every shift.

Rule 11. Class "D" mines and service contractors shall have at least one (1) part time safety engineer and one (1) full time safety inspector.

ESTABLISHMENT OF A SAFETY AND HEALTH ORGANIZATION

Rule 12. Employer shall establish and provide for a safety and health office which is independent from other offices under the direct and immediate control and supervision of the Manager who shall be primarily responsible for the formulation and effective implementation of the company's safety and health program and enforcement of these rules and regulations.

Rule 13. Safety and Health Office shall be headed by a duly registered Safety Engineer, and for Class "D" mine, its safety unit shall be headed by a part-time Safety Engineer.

Rule 14. Safety and health practices of every employer shall be monitored and regulated by the Bureau.

QUALIFICATION OF SAFETY MEN

Rule 15. All safety engineers and safety inspectors shall be duly registered with the Regional Office and the corresponding permit shall be issued for this purpose.

Rule 16. A Safety Engineer must possess the following qualifications:

Registration of Safety Engineers

- a) A duly registered and currently licensed mining engineer with at least one (1) year supervisory experience in mining operation and/or mine safety work; or
- b) A duly registered and currently licensed engineer, geologist, metallurgist with at least five (5) years experience in mining operation and/or mine safety work.

Provided that the applicant must have undergone 40 hours of occupational safety and health training/seminars sponsored by the Bureau and/or recognized institution.

Registration of Temporary Safety Engineers

- a) Applicants who failed to meet the aforementioned qualifications may still apply under this regulation: Provided that they shall possess the following requirements:
 - 1) Any duly registered and currently licensed Engineer, Geologist, and Chemist with at least two (2) years experience as Safety inspector preferably under the employ of the company.
 - 2) The applicant must undergo 40 hours of occupational safety and health training/seminars sponsored by the Bureau and/or recognized institution: Provided, that upon issuance of the permit, the applicant shall apply for the conversion of the permit to full pledged safety engineer permit upon meeting the minimum requirement prescribed in (1). Provided, further, that failure of the applicant to convert the said permit within two (2) years shall render the permit cancelled.

Rule 17. A Safety Inspector must possess the following qualifications:

Registration of Safety Inspector

- a) A graduate in any engineering, geology, metallurgy or chemistry course with at least one (1) year experience in safety work or two (2) years experience in mining operation; or
- b) A college undergraduate in any engineering, geology metallurgy or chemistry course with at least two (2) years experience in safety work or 3 years experience in mining operation; or
- c) At least a high school graduate with four (4) years experience in safety work or five (5) years experience in mining operation.

Registration of Temporary Safety Inspector

- a) A graduate in any Engineering, Geology or Chemistry course with one (1) year experience in Mining Operation
- b) A college graduate in any Engineering, Geology or Chemistry Course with at least one (1) year experience in Safety Work or two (2) years experience in mining operation.
- c) At least high school graduate with two (2) years experience in Safety Work or three (3) years experience in mining operation.

Those issued with the permit under this regulation shall convert the permit to full pledge safety inspector after meeting the minimum requirements and failure to convert the permit within two (2) years shall render the permit cancelled.

Rule 18. Those who have been holding the position of safety engineers or safety inspectors duly registered and approved by the Regional Office during the time of the promulgation of this Order, may be registered as such.

Rule 19. All safety engineer/inspector permits shall be subject to renewal every three (3) years with the Regional Office.

Rule 20. Employees with at least ten (10) years experience either in safety work or mining operation may be deputized by the employer as safety men, with the designation of a deputy safety inspector which shall be reported to the Regional Office.

DUTIES AND RESPONSIBILITIES

Rule 21. The Employer shall:

- a) Assess all safety and health risks in all its workplaces and deal with them in the following order of priority:
 - eliminate the risks;
 - control the risks at source; minimize the risk by means to include the design of safe work systems, and
 - in so far as the risk remains, provide for the use of personal protective equipment at no cost to the employees, having regard to what is reasonable, practicable and feasible and to good practice and the exercise of due diligence.
- b) Take every reasonable precaution necessary to ensure the safety and health of the employees while on duty;
- c) Make available personal protective equipment (PPE) in accordance with the type of work performed at no cost to the employee;
- d) Allow at least one (1) week period for orientation of newly hired employees which shall be in the form of lecture and/or actual observation of the working place where they will be assigned;

- e) Provide training of employees in first-aid, mine rescue, fire fighting and other safety and health measures and proper job procedures to increase competence;
- f) Be responsible for the adoption and enforcement of a set of safety and health rules and regulations applicable to each particular area and possibly with translation in the dialect understandable to the employees of the mine. A printed copy shall be distributed to every employee including the Bureau;
- g) The employer shall constitute a Central Safety and Health Committee (CSHC), which shall include labor, union representatives and representatives from service contractors if any. This committee shall maintain a continuous regular monthly meetings and shall submit the minutes thereof to the Director copy furnished the Regional Director;
- h) Provide hospitalization, medical facilities, including the transportation to the hospital and provide full treatment to employees injured and those suffered from occupational related diseases during the performance of their work (as required by Republic Act No. 3961, the Labor Code as amended and its implementing Rules and Regulations, the Social Security Law and the Philippine Health and Insurance Corporation);
- i) Provide all necessary facilities for a safe, sanitary and healthful working condition such as suitable toilets, showers, laundrying, drying of clothes, wash basins and changing facilities which are gender specific;
- j) Maintain a fully equipped first-aid station/s at strategic points in the mine;
- k) Submit to the Director a Safety and Health Program covering its area of operation fifteen (15) working days before every calendar year in accordance with the guidelines hereto attached;
- l) Inform the worker in a comprehensible manner of the hazards associated with their work, health risk involved and relevant technical and organizational measures applied to relevant mining activities or to the plant, machinery and equipment, appliances or structures;
- m) Involve the safety engineer in the preparation of risk assessment regarding the design, alteration selection or modification of processes, construction of structures, installations of machinery and equipment;
- n) Where reproductive health hazards and risk have been identified, provided training and special technical and organizational measures including the right to alternative work, where appropriate without any loss of salary, especially during health risk periods such as pregnancy and breast feeding;
- o) Provide the opportunity of all employees to undergo the following examination free of charge:

- Pre-employment exam
- Annual periodic exam
- Relation to work medical exam
- Transfer exam
- Separation exam
- Special medical exam

- p) Provide regular health surveillance of workers exposed to occupational health hazards;
- q) Provide where possible, for re-integration or rehabilitation of workers unable to undertake their normal duties due to occupational injuries.
- r) Provide where appropriate self-rescuers and sufficient fire proof and self-contained refuge chambers that are easily identifiable and accessible in the event of an emergency;
- s) Prepare an emergency response preparedness program for reasonably foreseeable industrial and natural disasters;
- t) Maintain a system of inspection to detect all hazards of operation and report or inform all concerned of any safety hazards that may affect or endanger the latter job and operation;
- u) Investigate each and every accident as well as those unsafe and unsanitary conditions with the aim of determining the best remedies to prevent its recurrence;
- v) Maintain a continuous and regular safety and health meetings for all employees;
- w) Provide bulletin boards to be displayed on conspicuous places accessible to employees for the posting of all notices and information regarding safety and health;
- x) Not assign any employee to work alone where he can not be seen, heard or cannot get proper and close supervision; and
- y) Be responsible for the compliance of this Order by its employees/service contractor's worker and other persons or entities who are within its premises.

Rule 22. The Safety Engineer/Safety Inspector/Deputy Safety Inspector shall:

- a) Institute and formulate safety and health program for the company in accordance with the guidelines prescribed for this purpose;
- b) Formulate emergency response preparedness program for the company in accordance with the guidelines prescribed for this purpose;
- c) Maintain a system of inspection to detect all hazards of operation and report or inform (to) all concerned of all safety and health hazards that may endanger the latter's job and operation;
- d) Make routine inspection of the mine;
- e) Make a daily report of inspection and inform the department heads concern and union/employees' representative on the places inspected as to ventilation, sanitation, unsafe acts/conditions and working procedures;

- f) Keep a record of all accidents and safety inspection reports including records and reports of service contractors, copy furnished the union/employees' representative;
- g) Receive oral and written reports of employees about unsafe and unhealthy conditions and recommend to management for remedial measures;
- h) Instruct/train employees on accident prevention, first-aid, and sanitation;
- i) Initiate the organization of Central Safety and Health Committees as required in this Order, and conduct meetings for the promotion of safety and health;
- j) Investigate and report all mine accidents and promulgate ways and means of preventing their recurrence; and
- k) Not alter or modify the accident scene as practicable as possible until the Bureau's investigation team has completed the inquiry.

RIGHTS OF EMPLOYEES

Rule 23. Employees shall have the following rights:

To request and obtain, where there is cause for concern on safety and health grounds, inspections and investigation reports to be conducted by the employer's representative/concerned government agencies.

To know and be informed of workplace hazards that may affect their safety and health.

To obtain information, relevant to their safety and health, held by the employer's representatives/ concerned government agencies.

To remove themselves from any location at the mine when circumstances arise which appear, with reasonable justification, to pose a imminent danger to their safety and health. Provided that they will report it immediately to their supervisor, safety engineer/inspector or worker's safety representative for evaluation.

To demand recognition of their rights in relation to safety and health policies.

To participate in the formulation of company safety and health policies.

Collectively select safety and health representatives.

Rule 24. Employees' representatives shall exercise the following rights: To represent workers of all aspects in safety and health matters including, where applicable, the exercise of the rights provided in Rule 23;

To participate in safety and health inspections and investigations to be conducted by the employer and concerned government agencies at the workplace;

To monitor and investigate safety and health matters;

To have recourse to advisers and independent experts;

To consult with the employer/government in a timely fashion on safety and health matters, including policies and standard operating procedures; and

To initiate and recommend to employer for training and career opportunities of the workers in relation to safety and health matters.

DUTIES OF EMPLOYEES AND EMPLOYEES' REPRESENTATIVES

Rule 25. The employee/employee's representative shall:

Faithfully observe and comply with all rules and regulations, standard operating procedures and notices pertaining to safety and health.

Promptly report and warn fellow employees of all unsafe and unhealthy conditions that maybe encountered in the mine;

To help management in the preservation and where applicable, implementation of safety and health rules and regulations;

Report for duty well-rested, sober free from influences of liquor or drugs or in such conditions as to enable him to use all ordinary precautions to avoid accidents;

Not carry intoxicating liquor or prohibited drugs into the working place;

Immediately administer first-aid, if qualified, to an injured fellow employee or get in touch with the nearest first-aid station or knowledgeable persons who shall make the necessary steps for the proper treatment of the injured employees;

Not commit nuisance nor loiter in any part of the mine before and after the shift; and

Not interfere with, remove, displace, damage or destroy any safety and health device or other appliances furnished for protection or interfere with any method or process adopted with the purpose of minimizing hazards.

Rule 26. The employee's representative shall:

Disseminate to employees the results of safety inspections;

Assists the employer in the conduct of information dissemination of workplace hazard to employees; and

Dutifully attend all regular meetings of the Central Safety and Health Committee and other Safety Committees.

CENTRAL SAFETY & HEALTH COMMITTEE

Rule 27. Every employer shall ensure that a Central Safety and Health Committee is established within one (1) month from the start of the operation.

Rule 28. The Central Safety and Health Committee shall consist of the following :

For Class A, B and C mines:

Chairman - The highest official of the mine or his authorized representative who occupies a key position in the mine.

Members:

Department heads;
Four (4) workers (union members or employee's representative);
The company physician/ nurse; and
One (1) representative from each service contractors
Secretary - The safety engineer.

For Class D mines;

Chairman - The highest official or his authorized representative.

Members:

Supervisors;
Two (2) workers (union members or employee's representative);
The company nurse; and
One (1) representative from each service contractors
Secretary -The safety inspector.

Rule 29. The employer shall be allowed to expand the minimum requirements of the composition of the committee as may be deemed necessary. In case where there is no labor union, the employee's representative shall be elected by majority votes.

Rule 30. The Central Safety and Health Committee shall:

Provide a forum for consultation and cooperation between the employer or manager of the mine, employees and members in initiating, developing and implementing measures designed to ensure the safety and health of employees at the mine.

Be well informed of the safety and health standards and to review and recommends to the manager or employer the rules and procedures as regards to the safety and health of the employees.

Recommend to the manager or employer the establishment, maintenance and monitoring of programs, measures and procedures relating to the safety and health of employees.

Conduct a monthly safety meeting and the minutes of which to be submitted to the manager/employer and the Bureau/Regional Office.

Review reports of inspection and accident investigations for proper implementation of mitigating measure.

Develop and conduct semi-annual drill and review of the emergency response and preparedness program of the company to test its effectivity to respond to every perceivable hazard that may arise in the mine.

Provide necessary support to the Bureau in the enforcement of the safety rules and regulations.

SAFETY AND HEALTH TRAINING

Rule 31. Employer shall provide employees who are involved in mining operation with safety and health training which shall be incorporated in its annual safety and health program. The safety and health training program shall include, but not limited, to the following:

New employees having no underground mining experience shall receive no less than twenty-four (24) hours of training if they are to work underground. Such training shall include instruction in the statutory rights of employees and their representatives, use of self rescue device and use of respiratory devices, hazard recognition, escape ways, walk around training, emergency procedures, basic ventilation, basic roof control, electrical hazards, first aid and the safety and health aspect of the tasks to which the employee will be assigned.

New employees having no surface mining experience shall receive no less than twenty-four (24) hours of training if they are to work on the surface. Such training shall include instruction in the statutory rights of employees and their representatives, use of self rescue device where appropriate and use of respiratory devices where appropriate, hazard recognition, emergency procedures, electrical hazards, first aid walk around training and the safety and health aspect specific to the task where the employee will be assigned.

All employees shall receive no less than eight (8) hours of refresher training no less frequency than once each twelve (12) months.

An employee who is reassigned to a new task in which he/she has no previous work experience shall receive training as required under items (a) and (b).

Rule 32. Upon completion of each training program, the employer shall certify that the employee has received that specified training in each subject topic. A machine copy of the certificate for each employee shall be kept by the employer and shall be made available for inspection at the mine site and a copy thereof shall be given to each employee at the completion of each training.

Rule 33. Employer who willfully make false certification shall be slapped with the necessary fines.

STOPPAGE, RESUMPTION AND DECOMMISSIONING OF OPERATIONS

Rule 34. In cases where mining operation shall be stopped, the manager shall notify the Regional Director in writing, copy furnished the Bureau, as to the following:

- the reason for and the planned duration of the stoppage; whether the closure is total or access to underground and/or open pit workings is to be maintained;
- if underground and/or open pit access is to be maintained, details of the arrangement that have been made for the provision of regular services and emergency services to ensure the safety of employees engaged in maintaining the mine;
- the measures that have been taken to prevent unauthorized access or entry to the mine; and
- the precautions that have been undertaken to protect underground equipment and service installations.

Rule 35. The manager shall notify the Regional Director, copy furnished the Bureau, on the resumption of mining operation after stoppage which contains;

- adequate information to demonstrate that basic mine services and emergency response capacity have been maintained or restored; and
- details of any substantial changes that have been made to the mine or mining operations at the mine.

Rule 36. Prior to the decommissioning of mining operations, the employer shall notify in writing the Regional Director, copy furnished the Bureau, the following;

- precautionary measures to ensure that access to underground workings have been secured to prevent unauthorized entry;
- precautions taken to prevent, so far as practicable, any post mining subsidence into underground workings, by backfilling stope voids and by other appropriate measures;
- measures taken to ensure that all plant, equipment and structures have been removed or secured and left in a safe condition;
- precautions taken to remove or proper disposal of all hazardous and toxic substances in accordance with R. A. 6969.

EXPLORATION OPERATIONS

Rule 37. No employee shall be permitted to work by the employer in all exploration activities unless the employee is properly oriented and provided with the necessary training to enable the employee to manage the risks associated with the hazard of exploration operations.

Rule 38. Employer shall make accessible to employees in a comprehensible manner a copy of safe working procedural manual involving all aspects of exploration works.

Rule 39. Employer shall ensure that employees assigned in exploration works are provided with suitable vehicles first aid kit and appropriate equipment which shall also include communication and emergency equipment.

Rule 40. Employer shall provide adequate training of employee in safety procedures whenever a helicopter or fixed winged aircraft is used in exploration work.

Rule 41. No employee shall be allowed to work in test pits, trenches and any excavation works in unstable ground or where depth exceeds 1.5 meters without the necessary support or shoring.

Rule 42. Employer shall not assign employee to engage in drilling and excavation operations unless the employee is adequately trained and proficient in performing these activities.

Rule 43. Explosives, flammable materials, dangerous and hazardous substances shall not be allowed in exploration activities unless. s such are covered by necessary permits and that the employees are trained to handle such materials.

Rule 44. No exploration activities shall be allowed in abandoned workings and mine shafts unless such have been thoroughly inspected and declared safe by safety engineer/safety inspector.

Rule 45. Employer shall institute remedial measures whenever disturbance of earth (test pitting, trenching, etc) is undertaken to make the site safe.

DRILLING

Rule 46. Drill operators shall inspect all drilling accessories, tools, hoisting cables, hoses, derricks and platforms and the drilling machine before the start of the drilling operation.

Rule 47. Drill operators shall see to it that the chuck head, water-swivel, drill rod strings and other pertinent connections are properly tightened and cleared of materials before starting to drill.

Rule 48. Drill operators shall give sufficient warning before starting the drill engine and commence drilling.

Rule 49. Only non-rotating cable shall be used for hoisting purposes.

Rule 50. One shall always keep clear from rotating or moving accessories or drill parts.

Rule 51. Drill rigs, floorings and platforms shall be properly anchored.

Rule 52. Railings shall be installed around platforms, otherwise men shall use safety ropes or belts.

Rule 53. One shall not hold the wrench at the gripping tip when tightening or loosening accessories particularly rods or casings.

Rule 54. When transferring drill machine, it shall be prohibited to straddle over the cable nor hold it with bare hands.

Rule 55. When moving drill machine up or down slopes, it shall always be anchored.

UNDERGROUND MINING RULES

Rule 56. All underground mines shall have at least two (2) interconnected, properly maintained openings to the surface, except:

Mines that have shafts, raises, or any opening in the process of being connected to the surface.

Shafts, winzes, raises, drifts, crosscuts, tunnels, inclines, grade, slopes for prospecting and exploration but not for the extractions of mineral under such conditions and with such precautions as the Bureau may require.

Rule 57. Routes to exits and fresh air bases through the underground workings shall be established and shall be plainly marked with signs showing the direction to be taken in case of emergency.

Rule 58. When first entering a working place, the ground shall be examined for any loose rocks and tested for drummy sound. Loose rocks with drummy sounds shall be barred

down or blasted or properly supported before any work is started. The walls and back of such working place shall be tested for loose rocks and drummy ground several times during the shift.

Rule 59. An effective auxiliary lighting shall be provided in any place in the underground mine where persons have to assess ground conditions at a distance greater than the effective range of a cap lamp.

Rule 60. In areas where there is an identified risk from natural occurring noxious or asphyxiant gases in underground mine, the manager shall ensure the provision of an effective and sufficient ventilation.

Rule 61. The manager shall never allow the storage of flammable liquids or materials within fifty (50) meter radius of any main entrance to the underground mine.

Rule 62. When employees are working one above the other or in any position where they might be injured by falling rocks or debris of any kind, they shall be required to inform one another to take precautions or give warning before work is started.

Rule 63. It shall be prohibited to stay or work under suspended loads.

Rule 64. Any equipment to be operated by remote control shall have a written procedures, which includes regular test, standard operating system and a safe procedure of retrieving when immobilized.

PROTECTION AGAINST WATER

Rule 65. No mine working or opening shall be driven or caused to be driven under rivers, sea or any known accumulation of standing or running water on the surface with less than 25 meters of back or thickness from the true river bed and the roof of the mine working in massive, unbroken or unfractured igneous rocks nor less than 50 meters back or thickness when the roof of the mine working is broken or fractured rocks. The true depth of the riverbed shall be determined at different points. Deviations from the above requirements shall be subject to the approval of the Bureau.

Rule 66. A daily inspection shall be conducted of the mine workings located under rivers, sea or any known accumulation of standing or running water on the surface.

Rule 67. A detailed survey of the said mine workings shall be made after every blast to ascertain the thickness or back of the said workings with respect to the true river or sea bed.

Rule 68. It shall be prohibited to perform work of any kind in mine workings located under the river, sea or any known accumulation of standing or running water on the surface without proper supervision.

Rule 69. No mine workings shall be allowed to approach nearer than eight (8) meters to any part of a winze or shaft or any other openings where there is known or suspected dangerous accumulation of water. When advancing towards the suspected or known water pocket, boreholes shall be drilled at least eight (8) meters ahead of a face in a lateral direction across the course of the drive, which shall not exceed two and a half (2.5) meters wide.

Rule 70. Where there is danger of a sudden inburst of water, additional safety precautions such as doors, dams, and the like, shall be constructed.

Rule 71. When blasting is done on the face of a mine working in the vicinity of another mine working suspected to be filled with water, the doors shall be properly closed.

SUBSIDENCE, LOOSE OR RUNNING GROUND SUPPORTS

Rule 72. All underground employees shall be instructed to recognize signs of impending ground collapse or subsidence. In such cases, the responsible mine officials shall be notified immediately to determine the course of action to be taken. In cases of imminent collapse, alarm shall be sounded and all personnel withdrawn.

Rule 73. Mining in loose or heavy ground shall be closely supervised and shall follow the accepted standard support methods.

Rule 74. When necessary, all working places and travelways shall be kept properly supported and only standard supports shall be installed in accordance with the generally accepted procedure in the mine.

Rule 75. In mines where ground support is necessary, adequate supply of support material shall be maintained and made available. Loose and scaly ground shall be properly supported.

Rule 76. If for any cause, the necessary support material is not available and the work place presents a hazard, the work at such place shall be stopped, barricaded, and warning signs posted.

Rule 77. In running ground, booms, safety stulls and spillings shall be erected to project ahead from the last set of support.

Rule 78. It shall be prohibited to remove or modify supports which are in place except under instructions and close supervision.

Rule 79. Fractured and broken roof or back of mine workings shall be provided with closely installed laggings of at least five (5) centimeters thick and shall be tightly blocked.

Rule 80. In breakthroughs, winzes and openings where there is danger of falling and slipping, adequate covers shall be provided. Where such openings are used as waste or ore passages, it shall be provided with grizzlies, guard rails or the like.

Rule 81. Floors in all types of supported stope shall be properly centered on the caps, particularly after blasting, and nailed whenever deemed necessary.

Rule 82. Safety platform shall be installed in all types of supported stope where filling is not kept close to the back.

Rule 83. Stopes except top slicing shall be provided with two (2) entrances, the stope manway and the fill raise manway for ventilation and escapeway.

Rule 84. Bastard and square sets in the stope shall be provided with blocks and wedges securely installed at the walls and roof. Top laggings with pigsties or blocks shall be installed on top of the highest sets.

STOPES AND RAISES

Rule 85. Every stope and development opening shall be provided with at least one pinch bar of appropriate length and diameter, properly pointed or sharpened.

Rule 86. Timber slides, chutes and ore pockets shall be provided with safety rope at the collar. When repairing linings, posts, caps inside chutes or cribbings of raises, ore passes or pockets, the use of safety belts and lifelines shall be required.

Rule 87. Manways of stopes, raises, and timber passes shall be provided with an overhead protection while in the process of advancing.

Rule 88. Chute compartments used as passageways from the manway to the adjacent stope shall be provided with double stage bulkhead of appropriate size.

Rule 89. Miners working in a shrinkage stope shall be provided with working platform or planks of appropriate size.

Rule 90. When blasting down mat in top slice stopes or in other heavily timbered stopes; the timbers shall be watered before blasting.

Rule 91. Blasting down mat in top-slice stopes shall be done in the middle of the shift. The stope shall be checked as soon as smoke has cleared after blasting. When top-slice stopes are worked in two shifts or more, blasting of the mat may be done at the end of the shift provided that the incoming shift is at hand to inspect the stope for fire as soon as the smoke has cleared out.

Rule 92. Extra precautions such as barricade and the like shall be taken when a raise or other opening is within six (6) meters of connection with a level or other openings.

Rule 93. Handles of chute gates shall project away from the dead end of haulageways.

Rule 94. When a hang-up chute needs to be blasted from below, a blasting stick shall be used in placing the charge.

Rule 95. Bars used for pinching a chute shall have a blunt end and preferably equipped with a suitable handgrip.

Rule 96. Only authorized persons shall be allowed near or within the vicinity of a chute or ore pocket when cars are being loaded.

Rule 97. Chutes shall not be drawn empty but shall have sufficient amount of rocks left in the bottom to prevent the rocks from flying out when ore or waste is being dumped from above.

Rule 98. Whenever possible all trolley wires passing in front of chutes, ore pockets, timber, ore or waste passes shall be cut before and after and shall be connected with insulated jumpers.

MANWAYS AND LADDERWAYS

Rule 99. Manways and ladderways shall have proper signs or notices whether passable or not. Entrances of passable manways or ladderways shall be kept clean and in good condition at all times. Unpassable manways or ladderways shall be provided with appropriate bulkheads and signs.

Rule 100. All ladders shall project at least sixty (60) centimeters above every platform of the ladderways unless convenient and sufficient handholds are provided.

Rule 101. All ladders shall be installed so far as practicable at an angle not greater than seventy (70) degrees from the horizontal and shall have substantial and adequate landing platform for every nine (9) meters vertical distance from each other. If installed greater than seventy (70) degrees from the horizontal, it shall have substantial and adequate landing platform for every four and a half (4.5) meters vertical distance from each other.

Rule 102. All ladders shall be staggered so that no section is directly in line with the next adjacent section. The ladders shall be constructed of adequately strong materials with rungs placed at equal intervals of thirty-five (35) centimeters apart and securely fastened and maintained in good condition at all times.

Rule 103. Platform openings shall be of appropriate dimension for easy passage.

Rule 104. It shall be prohibited to drop drill steels, tools or any material down a manway or chute.

Rule 105. It shall be prohibited to follow a man who is going up a ladder carrying tools, timber, drill steel and other materials.

Rule 106. Openings located on the level of multi-compartment raises shall be provided with cover and partition board shall be installed between the chute compartment and the manway compartment.

Rule 107. It shall be prohibited to install water and air pipes at the middle of ladderways. All pipes shall be installed on one side of the ladderway.

Rule 108. Manway compartments supported by square sets and exceeding forty-five (45) meters in height shall be provided with center and cross bracings.

Rule 109. Manway compartments being used as manway and timber pass shall be provided with adequate linings, timber slide and ladderway. Upper end of timber slide shall be properly covered when not in use.

Rule 110. When pulling the chute of an advancing raise, no person shall be allowed inside the raise.

Rule 111. In advancing double compartment raise sixty (60) meters or more in height, control chute shall be provided.

Rule 112. Manways of an advancing double compartment raise shall be situated away from the face of a dead end.

TRACK HAULAGE LEVELS AND TRAMMING

Rule 113. Trolley wires shall be installed not less than two (2) meters above the rails and all hangers shall be adequately insulated. If trolley wires are installed less than two (2) meters from the rails, it shall be provided with rubber or wooden guards.

Rule 114. Trolley hangers shall be securely fastened with the use of log screws if installed below the caps or any other wooden supports. Hangers installed along unsupported roofs or travel ways shall be securely fastened with the use of bolts to the steel rod or pipe. The steel rod or pipe support shall be adequately fastened to the roof of travel ways.

Rule 115. Hangers shall be installed at both sides of the splice with a maximum distance of fifty (50) centimeters from the splicer.

Rule 116. Trolley wires shall be sectionalized by proper switches at intervals not to exceed three hundred (300) meters; switches shall also be installed in all branch lines near the beginning.

Rule 117. Main haulage levels with inadequate clearance shall be provided with shelter holes placed not more than thirty (30) meters apart along the walkway side.

Rule 118. Live trolley wires shall be de-energized or properly insulated by using rubber or wooden trolley guards when working around them.

Rule 119. Diesel engines shall not be used in any part of underground workings and in tunnels under construction except when velocity of air current is adequate and concentration of gases are less than the maximum allowable.

Rule 120. Only locomotive operators or motormen or other authorized personnel shall be permitted to operate locomotive or motor. A brakeman or helper who is authorized to run a locomotive or a motor is subject to the same rules applied to locomotive operator or motorman.

Rule 121. Locomotive operators and motormen shall be required to take charge of their crews and equipment and the operation of haulage works.

Rule 122. It shall be prohibited to ride on locomotives or trains except the motormen or locomotive operators and other authorized haulage crews.

Rule 123. Motormen or locomotive operators on duty shall be supplied with and shall be required to carry at all times an independent light for use in case of power interruption.

Rule 124. The motormen or locomotive operators shall be required to be in his proper place on the locomotive or motor before the power is turned on.

Rule 125. Motormen or locomotive operators shall be required to give warning signals when starting, backing, approaching curves or intersections and shall reduce speed when men are known to be working or when passing chutes, switches, ventilation or other doors, or when rounding curves. Brakemen or helpers shall, likewise, be provided with whistles.

Rule 126. It shall be prohibited for motormen or locomotive operators to take signals from, or allow cars to be coupled or uncoupled by, or rail switched by, anyone except the brakemen.

Rule 127. Trains shall be pulled and not pushed by the locomotives except when not feasible to do so.

Rule 128. When it is necessary to push the trains, the brakemen or helper shall be required to stay inside the second empty car from the front.

Rule 129. Platform cars when attached to a train shall not be pushed ahead of the locomotive, except to a nearby switch. In this case, the locomotive shall travel slowly.

Rule 130. "Fly switching" shall not be permitted. Switches in a mine shall be made uniform and from designs with full consideration of safety in haulage.

Rule 131. The brakemen or helpers shall be prohibited to make running or "flying switches", run along a moving train, or get on or off while the train is in motion.

Rule 132. It shall be prohibited to ride between cars, or on top of loaded cars, nor pass from one side to another while the train is in motion.

Rule 133. Locomotive operators shall not be permitted to leave their locomotive unless it is at full stop, the control of which is in neutral position, the brake fully engaged and trolley pole removed from wire.

Rule 134. When taking over the train, the crew shall be required to conduct a complete inspection of the train.

Rule 135. A motorman or locomotive operator shall be required to keep his train or locomotive under such control at all times that *he* can stop within the distance he can see ahead or within the distance to the next crossing or turnout.

Rule 136. It shall be prohibited to reverse the motor for braking.

Rule 137. Train or locomotive shall not be moved if the locomotive operator is in doubt of the signals.

Rule 138. When using a light to signal, the train crew shall be required to use the following signals:

To stop train in motion, wave light horizontally.

To move train toward source of signal, swing light to circular motion.

To move train away from source of signal, wave light in vertical direction.

Rule 139. Brakemen or helpers shall be provided with whistles and the following code of signals shall be adopted:

1. One blow of whistle, to stop train in motion.
2. One blow of whistle, to start train forward.
3. Two blows of whistle, to move train back.
4. Three blows of whistle, to move train forward slowly.
5. Four blows of whistle, to move train back slowly.

Rule 140. Cars and trains shall be parked so as not to endanger persons on other trains or obstruct the ventilating current.

Rule 141. When there is a power failure, the motorman or locomotive operator shall be required to bring his train to stop, detach the trolley pole from the trolley line and not allow it to coast.

Rule 142. Coupling hook shall be used in coupling and uncoupling cars.

Rule 143. Haulage crews shall be required to know rules pertaining to blasting.

Rule 144. Haulage levels shall be kept free of spillage and debris. Tracks shall be kept well drained and properly surfaced.

Rule 145. Rails shall be heavy enough to carry safely the heaviest rolling stock and shall be firmly attached to ties of adequate size and spacing.

Rule 146. Rails, points and/or cross bonds on haulage levels shall be connected with plates, or welded and rails shall be well supported by ties.

Rule 147. The track shall be well aligned and curved and free from high or low joints, broken rails, defective switch and switch joints and improperly aligned frogs.

Rule 148. Where practicable, there shall be a continuous clearance on one side of at least seventy-five (75) centimeters from the nearest obstruction to the farthest projection of moving equipment.

Rule 149. Timber or other materials shall be piled so as to leave ample room for clearance between the pile and the train.

Rule 150. Manual switches whenever in use shall be provided with parallel throws and bridle bars.

Rule 151. A light, radio, or telephone signal system shall be provided to control movements of two or more locomotives or other self-propelled track-mounted equipment operated independently on the same track.

Rule 152. Locomotives shall be provided with adequate headlights, taillights and warning devices.

Rule 153. Trolley pole shall follow the direction of the locomotive. In case it is not possible and in places where forepoling is used, locomotives shall travel slowly.

Rule 154. Locomotives and cars shall be securely blocked before leaving them on a grade.

Rule 155. One or more cars shall be placed between locomotive and a car hauling rails, pipes or similar materials.

Rule 156. Only authorized electrician shall undertake electrical repairs on locomotives.

Rule 157. Trammers and muckers shall be required to inspect the muck for "misfires" and loose dynamite before shovelling it into the car.

Rule 158. Trammers and muckers shall be required to keep their muckpile at an inclination such that the rock boulders and muck from the top of the muck pile shall not roll down.

Rule 159. It shall be prohibited for trammers to place their hands on top of the car when pushing it. Mine cars shall be provided with handles welded below the top.

Rule 160. Muck in cars shall be properly levelled before starting to move the car.

Rule 161. Dry muckpile shall be wetted before loading.

TRACKLESS HAULAGEWAY

Rule 162. Extra precautions shall be observed for the safe operation of trackless units and adequate number of warning notices shall be conspicuously posted along the haulage way.

Rule 163. The road surface of each haulageway shall be regularly graded and ballasted to ensure that it is maintained in good and safe condition.

Rule 164. The dimensions in each haulageway in the mine shall be sufficiently provided with the necessary clearances.

Rule 165. An appropriate traffic control system shall be adopted whenever two or more trackless units are required to operate in a haulageway to minimize the risks of accidental collision between two units.

Rule 166. A safety niche for every 100 meters shall be provided along narrow haulageway where clearance between the side of equipment and wall is less than 0.5 meter on each side.

Rule 167. An escape shelter shall be provided along the haulage-way at regular intervals to protect the employee from passing low profile trucks (LPT)

CONVEYOR HAULAGEWAY

Rule 168. No employee shall be allowed to ride on a conveyor whether moving or stationary unless the conveyor is under repair.

Rule 169. An audible warning device shall be sounded every time before any conveyor belt at the mine is started to amply warn persons that the conveyor belt is about to start.

Rule 170. No employee shall be allowed to go under a moving conveyor.

Rule 171. The conveyor shall be installed with a suitable walkway or travelway to allow safe access for maintenance or other purposes.

WINZES, SHAFTS AND SHAFT STATIONS

Rule 172. The regulations governing shafts which are applicable to winzes shall be embodied.

Rule 173. Shafts shall be provided with doors, gates, guardrails or other protection as may be necessary.

Rule 174. No stopping shall be undertaken within sixteen (16) meters radius from the main shaft.

Rule 175. Shafts and winzes shall be provided with ladderways and handrails when the inclination from the horizontal exceeds twenty (20) degrees.

Rule 176. Shaft stations, loading and landing places shall be kept clean at all times.

Rule 177. When any work is to be done in a shaft, the hoistman shall be notified as to the nature of the work to be done. A clearance shall be given to the hoistman by the man in-charge of the work upon completion of the work.

Rule 178. Men working in shafts and winzes shall be required to wear safety belts with the lifelines firmly secured.

Rule 179. No employee shall be allowed to inspect or work in a shaft alone.

Rule 180. It shall be prohibited to commence work in a shaft until the hoist man has been duly advised and has turned over the signaling responsibility to the repair crew.

Rule 181. No hoisting shall be done in a hoisting compartment while it is under repair or inspection. The hoist may be operated if required during repairs or inspection provided that the necessary precautionary measures have been observed.

Rule 182. When hoisting is done above men working in a shaft or winze, double deck bulkheads of adequate sizes shall be installed above the working chamber.

Rule 183. A sign marked "MEN WORKING IN SHAFT" shall be conspicuously installed and guards be posted if necessary whenever men are at work in the shaft.

Rule 184. Materials lowered or hoisted in shafts shall be properly secured.

Rule 185. Repair work in shafts using cage or skip shall be done from an adequate platform bolted to the cage or skip with an iron bonnet securely clamped on the hoisting cable or a cage with a stationary platform of sufficient strength shall be used.

Rule 186. When changing skip or cage or doing any other work in shafts, the man in charge of the work shall be required to ensure proper materials are used for platform. A wooden platform shall not be less than ten (10) centimeters thick and openings shall not be more than five (5) centimeters.

Rule 187. When men are working in the shaft, care shall be taken to prevent materials from falling down. It shall be prohibited to place tools or materials near the shaft where these are likely to fall.

Rule 188. When men are working at the bottom of the shaft or winze, the cage, skip bucket or other conveyance shall not be lowered directly to the bottom but always stopped about 4.5 meters above until a signal is given to lower them.

Rule 189. A cage or skip shall be used when doing electrical work in or adjacent hoisting compartment of any shaft, otherwise, adequate bulkhead shall be provided above the working platform.

Rule 190. For any hot works, such as oxy-acetylene or arc welding in a shaft, all adjacent timbers and other combustible materials shall be inspected and wetted.

Rule 191. If work has to be done on top of muck in loading pockets, it shall be required to guard against loading and drawing while such work is in progress.

Rule 192. After a repair has been made in the shaft, a trial run throughout the hoisting depth shall be made of the empty cage or skip to ascertain whether the shaft is safe and clear.

Rule 193. It shall be prohibited to stay nearer than three (3) meters from the shaft collar while waiting to board the cage.

SHAFT OR WINZE SINKING

Rule 194. When it is necessary to blast in shaft bottom or shaft station, the hoistman upon receiving the blasting signal shall be required to raise the bucket or skip at a safe distance and lower back to former position to acknowledge the signal. He shall not answer any other signal after this except the signal to hoist men.

Rule 195. Riding on crosshead or bucket rims shall be strictly prohibited.

Rule 196. No bucket or other means of conveyance shall be allowed to leave the top or bottom of the shaft or winze unless the shaft in-charge has steadied it.

Rule 197. In the course of sinking shafts or winzes, the bucket or other means of conveyance shall not be filled with loose rock or other materials above the level of the brim.

Rule 198. It shall be prohibited to work at the bottom of the shaft unless protected by an adequate covering extending over the whole area of the shaft, with sufficient space left for the passage of any sinking cage, skip or other means of conveyance. The clearance of cover from the shaft bottom shall be maintained at eighteen (18) meters and twenty-seven (27) meters for vertical and inclined shafts, respectively.

Rule 199. In the course of shaft or winze sinking, the ladderway shall be placed within such minimum distance from the bottom of the said shaft or winze that will secure the ladderway from damage during blasting. The lower end of such ladderway to the bottom of the shaft or winze shall be provided with chain and wire rope ladders.

Rule 200. In the course of shaft or winze sinking and before drilling is commenced, the ground shall be thoroughly washed over within one (1) meter of any hole to be drilled. If the ground to be examined is under water, it shall be drained so as to expose the presence of all misfires and pockets.

GENERAL HOISTING RULES

Rule 201. Maximum rates of hoisting speed for materials and rocks shall be fixed by the manager.

Rule 202. A schedule of the hoisting speeds shall be shown on the signal code signs in the hoistroom.

Rule 203. The working speed for hoisting or lowering men shall not exceed the speed recommended by the hoist manufacturer.

Rule 204. A Hoistman Log Book shall be kept to record all hoisting operation entries.

Rule 205. When hoisting of men is done through a shaft or winze or raise over twenty (20) meters deep, proper safety device shall be installed to prevent overwinding.

Rule 206. The manager shall determine the maximum number of men permitted to ride in the hoist at any one time and such shall be posted at each station.

Rule 207. Except when shaft or winze sinking operations are in progress, hoisting or lowering men through a vertical shaft or winze 30 meters or more shall not be permitted unless an iron-bonneted safety cage, skip or bucket is used.

Rule 208. It shall be prohibited to get in or out of the cage, skip or bucket after the signal to move has been given to the hoistman.

Rule 209. The end of tools, timber or other materials protruding out of the cage and handled through the shaft shall be securely fastened.

Rule 210. Drill steels or other materials shall be placed far enough from the collar of the shaft or other opening.

Rule 211. It shall be prohibited to ride on the bail of the skip.

Rule 212. Men shall be required to properly line up without crowding or pushing when boarding the cage.

Rule 213. It shall be prohibited for men to ride on boards placed across the top of skips.

Rule 214. Open light or smoking in the cage, skip or bucket shall be prohibited.

Rule 215. Only shaft tenders, helpers and other authorized persons shall be permitted to ride in a cage or skip when explosives, tools, equipment and other loose materials are being handled.

Rule 216. Cages in which loading and unloading of heavy machinery or equipment is done shall be properly secured.

Rule 217. Provisions for emergency braking shall be made aside from the hoist brake.

Rule 218. Emergency brakes shall be tested at every change of shift.

Rule 219. Open hooks shall not be used as attachment with a bucket, cage or skip or other conveyances. Only safety hooks, shackles or the like shall be used.

Rule 220. In shafts where cages or skips are used to hoist men, an emergency cable or chain sling shall be provided as an additional precaution in the event of the failure of the clevis pin the emergency sling will prevent the skip or cage from falling. However, especially designed attachments may be used with the permission of the Bureau, provided strict examination of attachments is done.

Rule 221. Safety catches or dogs of cages shall be inspected and drop tested with load equivalent to its full capacity at least once every three (3) months.

Rule 222. Safety catches or dogs of cages or skips shall be provided when used for hoisting men, except:

Cages or skips with three or more cables; or
Where steel guides are used.

HOISTING OPERATOR

Rule 223. Only qualified hoisting operators shall be allowed to discharge the duties of hoistmen or hoist operator.

Rule 224. The hoistman or hoist operator shall be required to comply with the following requirements:

At least high school graduate.

Pass a physical and medical, neuro-psychiatric examinations and drug testing by the duly licensed physician of the employer attesting that he is physically and mentally fit.

The examination must be of recent date, not more than thirty (30) days (Appendix C) prior to his employment as hoisting operator.

Show competence in an actual test in handling the hoist and knowledge of hoisting procedures.

Know and be able to carry out all the hoisting signals or code as directed.

Submit to a periodic re-examination by the duly licensed physician of the employer at intervals not exceeding six (6) months.

Rule 225. Duties and responsibilities of the hoisting operator.

At the beginning of a shift, examine and inspect the hoist and accessory hoisting apparatus and report immediately to the proper authorities any part not functioning normally.

Not operate the defective hoist or hoisting apparatus, which will endanger the safety of men and apparatus.

At all times, be directly in charge of his engine and shall not at any time during the shift delegate any of his duties to any other person except to the designated trainee under his supervision.

Keep careful watch over his engine and all machinery under his charge.

Hold no conversation with anyone or distract him while his hoist is in motion.

Exclude anyone from the hoist room except those who are authorized.

Not to answer any signal which is not included on the signal code list.

Not move a cage, skip or bucket unless a proper signal is received.

Always return or acknowledge the proper signal that he receives.

After returning the signal, wait for a while before finally hoisting or lowering the cage, skip or bucket

Not accept hoisting instruction by telephone unless made by an authorized person.

Whenever possible, place cages or skips in balance before hoisting men.

Not have cages or skips carrying men when the cage/skip is temporarily parked prior to motion without a cager.

At the beginning of each shift, check all the apparatus by operating the cage through the full length of the shaft before hoisting or lowering men especially when the hoist has been shut down for sometime.

After any repairs, run the cage, skip or bucket or other apparatus up and down the working part of the shaft at least once.

Before leaving his post, run the cage, skip or bucket or other hoisting conveyance at least three (3) meters above the collar of the shaft, or above a level or station.

Not permit oiling of engine while in motion.

Periodically check the indicator of the hoist with the actual level intervals.

Report in detail to the relief hoistman and enter in the logbook any change or adjustment made on the equipment by a mechanic or other authorized persons.

HOISTING OF PERSONS AND MATERIALS

Rule 226. The winding system shall be:

Capable of running at various speeds with light and heavy loads, and can be readily slowed and stopped and after stopping, can immediately be started again in either direction.

Capable of lifting from the bottom to the top of the shaft or winze the maximum unbalanced load on one drum.

Capable of being maintained in a position of rest by means of its own brake or brakes when each winding drum is unclutched from the engine with no more slipping greater than thirty (30) centimeters when the conveyance is loaded to the maximum weight of persons, whichever is greater. In calculating the total weight of persons for the purpose of this sub-rule, seventy (70) kilograms shall be allowed for each person.

Such that the rope will not slip on the drum or sheave under any possible working conditions where no parts of the rope is rigidly fixed.

Rule 227. The drum of the winding engine shall have flanges or horns, or other appliances which are sufficient to prevent the rope from slipping off or coiling unevenly.

Rule 228. Every winding system shall, in addition to any marks on the rope, be provided with reliable depth indicators showing to the hoisting operator at his driving seat at all times.

The position of the cage, skip or other means of conveyance; and

At what place in the shaft, changes or gradient necessitated reduction in speed.

On any new engine installed after approval of this Order, the pointer of the dial indicator on the driver's right hand shall move in a clockwise direction when lowering and in the case of a post and spiral indicator the pointer shall move up or down as the conveyance moves up or down.

In the case of Whiting hoists, single drum hoist and hoists having two (2) drums permanently fixed on one shaft, only one indicator shall be provided.

Rule 229. In every shaft exceeding one hundred (100) meters in depth, adequate provision shall be made whereby the hoistman is warned of the arrival of the cage, skip or other means of conveyance at a point in the shaft, the distance of which from the top landing place is less than the equivalent of three (3) revolutions of the drum or sheave of the winding engine.

Rule 230. To all hoisting engine operating in shafts, the following requirements shall apply:

Where persons are regularly conveyed, there shall be fitted at least one efficient automatic overwinding prevention device.

There shall be fitted above the bank spring keps or jack catches or some other effective contrivance to support any conveyance detached as the result of an overwind.

Where the end of the winding ropes is fastened to the drum of the winding engine, there shall be fitted detaching hooks to detach from the winding rope and support any overwound conveyance in the headgear. Such detaching hooks shall be additional devices to those required in paragraph (b) above: Provided that the Director or any of his authorized representative may grant exemption from the requirement of fitting detaching hooks in the case of a winding system in a vertical shaft in the course of sinking.

Where the winding rope is not fastened to the drum or sheave of the winding engine:

The over-run space on the headgear above the highest established stopping place shall be provided with rigid guides or other appliances so arranged that the overwound conveyance is retarded; and

The over-run space at the bottom of the shaft below the lowest established stopping place shall be provided with rigid guides or other appliance so arranged that an overwound conveyance is retarded and arrested before it can collide with any fixed obstacle.

Where speed of over three hundred (300) meters per minute is permitted, there shall be fitted and in use a tachograph and speed indicator which shall be maintained in efficient working order. The speed indicator shall be so situated that the winding speed can at all times be easily read by the engine driver from his driving seat.

Rule 231. Headframe and shafts shall have provisions for over-winding and over-run, respectively, as follows:

The headframe shall, except in such cases as may be exempted in writing by the Director (Mines and Geosciences Bureau) or his authorized representative be carried to such height as to allow a clearance of at least eight (8) meters in which the conveyance can travel above the highest passenger landing place in case of overwind before it collides with any fixed obstacle excluding contact with any retarding appliances provided in paragraph (d) of Rule 230.

The shaft bottom shall, except in cases which may be exempted in writing by the Director(Mines and Geosciences Bureau) or his authorized representative be carried of such depth as to allow an over-run space of at least eight (8) meters in which the conveyance can travel below the lowest passenger landing place in case of an overwind before it collides with any retarding appliance provided for in paragraph (d) of Rule 182; Provided that such over-run space need not be provided in the case of a shaft in the course of sinking or in the case of a shaft not exceeding three hundred (300) meters in depth where the winding system does not include the use of a balance rope or tail rope.

Rule 232. Requirements and procedures regarding examination, testing and use of hoist rope, tail rope or balance rope shall be as follows:

A hoist rope, balance rope or tail rope newly installed, whether new or previously used and the attachments connecting any such rope to any conveyance or balance or counter-weight shall be carefully examined by a competent person appointed for the purpose by the manager, and shall not be used in connection with the hoisting of persons until the conveyance loaded with the maximum permitted weight have been run two complete test trips down and up between the highest and the lowest stopping places ordinarily in use. The result of this examination and test shall be immediately recorded in a logbook, termed the Hoisting Rope Logbook, which shall be opened to the Director or his authorized representative. The record shall be signed by the person who conducted the examinations and test.

The Hoisting Rope Logbook shall contain the following particulars:

- (i) Name of manufacturer
Date of manufacture
Date of rope installations
Name and type of shaft
Winding plant certificate number
Coil number of rope
Length of rope in meters
Weight of rope per meter in kilograms
Diameter of rope in centimeters
Construction of rope:
Type and length of lay;
Number of strands;
Class of heart of rope;
Lubrication;

Construction of strands:
Number of wires
Diameter of wires;
Class of core;
Class of steel in wires;
Tensile strength of steel;
Breaking load of rope:
Rope test certificate number and place test
- (ii) Dates of recapping rope
Dates of testing rope
Breaking load at each test
Dates of shortening rope
Dates of turning rope and for end
Date rope taken off
Dates of annealing or renewing rope connections.

The Hoisting Rope Logbook shall be examined and countersigned by the examiner appointed as soon as practicable after any entry is made.

Rule 233. In case of a winding engine installed erected before approval of this Order, where the winding arrangements are such as to render any provision of Rule 184 erroneous the Director (Mines and Geosciences Bureau) may grant exemption therefrom under such condition as he may deem proper.

Rule 234. No trolley, trailer or other conveyance shall be attached to a conveyance operated by a winding engine in a shaft or winze where persons are regularly conveyed unless permission in writing has been obtained from the Director under such condition as he may impose.

Rule 235. The Director shall fix the maximum duration of the shift to be worked by the hoisting operator and shall in such a case insert this condition on the certificate of permission.

Rule 236. The manager shall appoint in writing a competent person or persons whose duty shall be to examine carefully:

at least once a day the winding ropes, the balance or tail ropes, the connection of the winding ropes to the drums, the connection referred to in Rule 241 the conveyances and any safety catches attached thereto, the pulley wheels and sheaves, the brakes, the depths indicators, the safety device and all external parts of the winding equipment.

at least once a week, the signalling arrangements and the safety devices used in connection therewith.

at least once a week, the guides or rails and the winding compartments generally including the doors, gates or barriers and auxiliary equipment at stations and landing platforms.

at least once a week, the overwinding prevention device and the external parts of the engine.

at least once a year, the winding engine as to the working condition of the internal mechanical parts and, as far as reasonably practicable the internal electrical parts.

at least once a month, at intervals not exceeding forty-five (45) days, the structure of the winding rope and the balance or tail rope with the view of ascertaining the amount of deterioration thereof. For the purposes of this examination, the rope shall be thoroughly cleansed at places to be selected by the persons making the examination who shall note any reduction in the circumference of the rope, any variation in the length of the lay of the rope, the superficial condition of the wires as to wear, corrosion, fractures and brittleness, and all other data necessary for ascertaining the amount, extent and distribution of the deterioration of the rope. If the examination discloses features such as undue or rapid wear, or feature of the wire which, although not constituting sufficient reason for condemning the rope, call for than usual attention, the examination required under this paragraph shall be made more frequently.

at least once a month or at intervals not exceeding forty-five (45) days, the connection between the winding rope and the run and the connections referred to in Rule 241.

Rule 237. Any evidence of any weakness or defect which may endanger the safety of persons and cannot be immediately remedied, the persons making the examination shall without delay report such to the manager in writing. Until such weakness or defect is remedied the winding plant shall not be used except in so far as may be necessary in connection with the remedying of such weakness or defect.

Rule 238. The manager shall keep or cause to be kept at the mine the following books termed:

The Mechanic Logbook in which shall be entered the name of each person appointed under Rule 236 to perform the duties mentioned in paragraph (a) or (b) thereof together with the particulars of the duties of such person. A true report of every examination referred to in paragraph (a) and (e) of Rule 236 shall be recorded and signed without any delay in the Mechanic Logbook by the person making such examination. This book shall be inspected and the reports therein shall be countersigned at least once a week by the person appointed in terms of Rule 223 and 224.

The Shaft Log Book in which will be entered the names of persons appointed under Rule 241 to perform the duties mentioned in paragraph (c) thereof together with the duties of each person. A true report of the results of every examination referred to in that paragraph shall be recorded and signed without delay in the Shaft Logbook by the person making such examination. This book shall be inspected and the reports therein countersigned at least once a week by the manager.

Rule 239. The manager shall keep or cause to be kept in the hoist room a book to be termed the Hoistman's Logbook, in which shall be recorded in duplicate the following :

a true report of the condition of the winding engine, including the brakes, clutches, reversing gear, depth indicators, and all other fittings. Such report shall be made and signed by the hoisting operator for each period of charge, the time and duration of which are to be recorded;

a true report of the condition of the signalling arrangements together with a record of any signals received by the operator which he has questioned. Such report shall be made and signed by the hoisting operator for each period of charge;

any special instructions involving the safety of persons given to the engine operator. Such entry shall be signed by the person giving the instruction and countersigned by the hoisting operator.

Rule 240. Entries in the Hoistman's Logbook shall be inspected and countersigned daily by the persons appointed to carry out the duties specified in Rule 236. The duplicate shall be inspected and signed daily by the persons appointed in terms of Rules 223 and 224.

Rule 241. At intervals of not more than six months, the connections:

between the conveyance and the winding rope;

between the conveyance and any trolley trailer or other attached conveyance; and

between the conveyance and any balance or tail rope, shall be annealed or given other proper heat treatment or be discarded and replaced; provided that exemption from this provision may be granted by the Director in the case of connections of a class of steel which does not require heat treatment. The provisions of this paragraph shall also apply to the connection between a counterweight and the winding rope and between a counterweight and any balance or tail rope.

Rule 242. A proper record shall be kept of the heat treatment of the connection referred to in Rule 241 and the person appointed in terms of Rules 223 and 224 shall add to the record his

report on the method and procedure followed in such treatment and his comments on the results. All such connections and their component parts shall be clearly marked for the purpose of identification.

Rule 243. At least one spare hoist rope suitable for each winding engine in use shall be kept in reserve in every mine, and shall be at all times ready for use at all times except when there are two (2) engines for the same shaft or when the Director has in writing granted exemption from the requirements of this section.

Rule 244. No persons shall travel in a conveyance operated by winding engine if such conveyance is loaded or partially loaded with rocks and no person shall travel in a conveyance operated by a hoisting engine which is being simultaneously used for the hoisting of rocks: Provided that if authorized by the manager, persons engaged in sinking operations in a vertical shaft or winze may descend such shaft or winze in a conveyance operated by a hoisting engine which is being simultaneously used for the raising of rocks.

SIGNALS

Rule 245. Every shaft or winze fifteen (15) meters or more in depth shall be provided with an efficient and adequate means of distinct and definite signals between hoist room and the various points in the shaft where hoisting is being done (See Appendix D for Signal Code).

Rule 246. All signals shall be made distinctly as follows:

when the conveyance is "ready to move", five (5) bell signals are given to the hoist operator. He shall acknowledge that he is ready to hoist by returning the same signal once.

after acknowledgement is made the hoist operator under no circumstances shall acknowledge any other signal given to him.

Rule 247. Signaling device in shafts or winzes or stations shall be safe and within easy reach of the person inside the bucket, cage or skip.

Rule 248. Signaling device shall be protected from falling objects and other destructive elements.

Rule 249. The signal code used in the mine shall be posted conspicuously in hoistrooms, at shaft stations and at places where signals are required.

Rule 250. The signal code shall be plainly printed and of such size as to be easily read at all times.

Rule 251. All signals shall be given according to the signal code as hereby prescribed under "Appendix D" or in emergency cases as determined by the manager.

Rule 252. In addition to posting the full signal code at the required locations, there shall be placed a separate signboard on which must be displayed in large legible letters the destination of the station and corresponding bell signal.

CAGE, BUCKET AND SKIP TENDER

Rule 253. In every mine operated on two or more levels in which men are hoisted by cage, skip or other conveyance other than a bucket, such cage or other conveyance shall be operated under the charge of a person appointed as tender, and no person other than the tender

shall give the signal for the movement of the cage, skip or other conveyance during the handling of the men through the shaft.

Rule 254. Cagers shall be required to comply with hoisting rules and regulations.

Rule 255. Only competent persons trained for the job shall be selected as cagers, skip tenders, etc.

Rule 256. Only the cager or tender is permitted to give signals except in cases of emergency where any competent person may give the signal.

Rule 257. The skip or cage tender shall be prohibited from giving signals to hoist or lower before closing the gate/door of his cage, and also that of the shaft.

Rule 258. Every cager shall be required to inspect the cage and equipment he is to operate and report any irregularity to the hoisting operator.

Rule 259. Every cager or tender shall be required to acquaint himself with the fire protection device in the shaft and stations.

HOISTING ROPES OR CABLES

Rule 260. The dynamic load factor of a new cable shall be calculated by a competent engineer by dividing the breaking strength of the rope as rated by the manufacturers or in accordance with approved tests on a sample made by authorized agencies, by the sum of the maximum load to be hoisted, plus the total weight of the rope in the shaft when fully let-out, plus bending and acceleration stresses.

Rule 261. The minimum static load safety factor shall not be less than those shown in the following:

TABLE I - SAFETY FACTORS OF HOISTING ROPES*

<u>MINIMUM DEPTH IN METERS</u>	<u>MINIMUM SAFETY FACTOR OF NEW ROPE</u>	<u>SAFETY FACTOR WHEN ROPE SHALL BE DISCARDED</u>
150 or less	8	6.4
151 – 300	7	5.8
301 – 600	6	5.0
601 – 900	5	4.3
901 or more	4	3.6

*Excerpts from U. S. Bureau of Mines, Bulletin No. 75J

ATTACHMENT OF HOISTING ROPES

Rule 262. A rope shall be attached by means of zinc-filled socket or rope clips or clamps or the like.

Rule 263. Socketing. The method of connection of sockets to cables shall meet the detailed specifications of the American Standard Association: Pamphlet M-11 (pp. 29-30).

Rule 264. Rope clips. The U-bolt type cables clamps or clips shall be used. The base of U-bolt shall be in contact with the short end of the rope.

Rule 265. The number of clips required to develop approximately 80% of the strength of a 6 by 19 plowsteel rope shall be as shown in the accompanying tabulations.

TABLE II - SPACING AND NUMBER OF CLIPS FOR DIFFERENT SIZE OF HOISTING ROPES*

DIAMETER OF ROPE		NO. OF CLIPS	SPACING BETWEEN CLIPS OF FASTENING		EFFICIENCY	LENGTH TO WRENCH	
mm.	(in.)		mm.	(in.)		mm.	(in.)
6.35	¼	5	114.0	4 ½	77.4	457.2	18
22.22	⅞	5	139.7	5 ½	79.1	609.6	24
28.57	1 ⅛	5	177.8	7	80.0	609.6	24
25.40	1	5	152.4	6	79.9	609.6	24
31.80	1¼	6	203.2	8	82.1	609.6	24
34.92	1⅜	7	228.6	9	-	609.6	24
37.65	1½	8	254.0	10	-	609.6	24
41.27	1⅝	8	254.0	10	-	609.6	24
44.45	1¾	8	279.0	11	-	609.6	24
47.60	1⅞	8	304.8	12	-	609.6	24
37.65	1½	8	304.8	12	-	609.6	24

***Excerpts from U.S. Bureau of Mines Bulletin**

Rule 266. The length of the thimble required for clamped ropes attachment shall be at least fourteen (14) times the diameter of the rope and eight (8) times the diameter in width.

Rule 267. New rope shall be long enough to permit cutting of the end at least six (6) times. The cutting of the rope shall be on the point of the last clip at both ends.

Rule 268. A minimum of three (3) laps of rope shall be on the drum when the skip, cage or bucket is at the lowest point of the hoist way after the final cutting and installing have been made.

DISCARDING OF HOISTING ROPE

Rule 269. When a standard rope has six (6) wires broken in one rope lay, the same shall be discarded and replaced.

Rule 270. When the wires on crown are worn out to sixty-five (65) percent of their original diameter, the rope shall be replaced.

Rule 271. Where there is a sudden decrease in the diameter of the rope the same shall be replaced.

Rule 272. When marked corrosion appears, the rope shall be replaced.

Rule 273. When the actual factor of safety is less than the prescribed minimum factor of safety of the rope as shown in Table I, the rope shall be replaced.

Rule 274. Hoisting ropes shall be replaced as soon as there is evidence or undue weakness or other conditions that indicate failure.

SHEAVES AND DRUMS

Rule 275. Sheaves and drums shall be at least as large as the minimum size recommended by the manufacturers. Good practice requires that the diameter of the drum or sheaves for wire rope shall not be less than as follows:

TABLE III - DIAMETER OF DRUM OR SHEAVE WITH RESPECT TO SIZE OF ROPE

<u>TYPE OF ROPE</u>	<u>DIAMETER OF DRUMS OR SHEAVES</u>
For ropes of 6 X 7 construction	- 96 X the rope diameter
For ropes of 6 X 19 construction	- 60 X the rope diameter
For ropes of 8 X 19 construction	- 30 X the rope diameter
For ropes of 6 X 37 construction	- 30 X the rope diameter

U. S. Bureau of Mines Publication (Miners Cir. No. 54, 1965)

Rule 276. Fleet angles shall not be more than one and one-half (1 1/2) degrees.

Rule 277. Proper lubrication of the rope shall be done.

SLOPE ROPE HAULAGE

Rule 278. Slopes or inclines over forty-five (45) meters in depth shall comply with the herein set of regulations (Rule 279-285).

Rule 279. The maximum safe working load shall not be more than one-fifth (1/5) of the breaking load as given in the schedule of the cable manufacturers for 915 meters or less and not more than one-fourth (1/4) for over 915 meters.

Rule 280. Safety switch or other equally efficient derail device for skips shall be installed in all inclines and slopes.

Rule 281. It shall be prohibited for a person to walk on slope or incline while hoisting is in progress.

Rule 282. It shall be prohibited to ride in or on cars or platform of any slopes or inclines without proper authorization from the manager.

Rule 283. Hoist shall be situated so that operator has a full view of the trip at all times. if this is impractical, the hoisting apparatus shall be provided with a suitable indicating device showing at all times the position of cars or trips.

Rule 284. Rollers shall be spaced at unequal intervals to prevent rhythmical vibration of the ropes.

Rule 285. Rollers for carrying wire ropes in inclined shafts or slopes shall not be spaced more than thirty (30) meters apart.

AIR HOIST

Rule 286. Air hoists used for hoisting in raises shall be kept in proper working order at all times and pulley guards shall be provided. Skips or buckets when not in use shall be placed down on the level.

Rule 287. Air hoist shall be installed in place that neither the machine nor the operator is exposed to material falling down the raise.

Rule 288. In shaft sinking due to wet condition of the working compartment, only air hoist and other compressed air apparatus shall be used.

SCRAPER/SLUSHER MACHINES

Rule 289. An adequate and effective scraper guard shall be provided to protect the operator from being hit by broken cable.

Rule 290. Electric scraper/slusher shall be properly grounded.

Rule 291. When scraping in open working places, the operator shall be provided with adequate and effective overhead protection.

Rule 292. The scraper/slusher operator and his helper shall be required to stay in a safe place while the scraper/slusher is in operation.

Rule 293. If electric scraper/slusher are to be raised vertically from one elevation to another, an independent hoist shall be used. A safety sling of appropriate size shall be provided on both lines of the air hose of the machine to serve as additional anchor.

Rule 294. Air slusher/scrapers shall be properly anchored.

MUCKING MACHINE

Rule 295. Only authorized person shall be allowed to operate a mucking machine.

Rule 296. The compressed air or power running the mucking machine shall always be closed when not in use.

Rule 297. Safety pin or bar or any other safety device that can be used to hold the bucket in an upright and stable position shall be provided. This device shall be chained, or hooked or anchored by any suitable means to the side of the machine for ready use.

Rule 298. While re-railing a mucking machine or whenever it becomes necessary to do some work in front of the machine, the bucket shall be properly secured.

Rule 299. Operators knuckle guard and platform shall be provided and shall be in its proper place when machine is in operation.

Rule 300. Mucking machine hoses and other equipment shall be retreated at a safe distance from the face before blasting.

Rule 301. Drill steels and mucking machine bucket shall not be used to sprag a derailed mucking machine back on the track.

BLOCK CAVING

A. Grizzly Level Operation

Rule 302. Slusher/grizzly level operators and helpers shall be provided with the necessary personal protective equipment and working tools.

Rule 303. Slusher operator shall be required to check the slusher motor and its accessories such as circuit breaker, motor cover, push button switch and the proper winding of the slusher cable on the slusher motor drum before any slushing is to be done.

Rule 304. Missing or defective signal device and spotlight as well as grounded or improperly insulated spotlight lines shall be reported immediately to the supervisor-in-charge or electrician on duty.

Rule 305. Circuit breaker of slusher motor shall always be switched off when entering the slusher line.

Rule 306. Missing or defective stop boards of finger or draw raises shall be replaced immediately.

Rule 307. Defective parts of grizzlies shall be repaired immediately.

Rule 308. Only finger or draw raises scheduled by the person in-charge of the shift shall be drawn.

Rule 309. One shall always stay at the safe side of the finger or draw raises being inspected or stopboards being removed to be able to retreat safely when there is an in-rush of ore especially when there is water.

Rule 310. Appropriate tools such as chute or draw bar or rope shall be used when removing or pulling up the stop boards of the finger or draw raises.

Rule 311. Before slushing ore into the short ore pass filling up transfer raises, it shall be insured that the chute gates are closed.

Rule 312. As much as possible, boulders shall not be blasted at the grizzly to avoid damage to the slusher motor as well as grizzly bars.

Rule 313. Stop boards of finger raise or draw raise shall be returned in place when the draw had been completed.

Rule 314. Pipe, rod or chain shall be provided as handholds for persons passing over grizzlies.

Rule 315. Hang-up finger raises shall be reported immediately. In no case shall employees be allowed to enter the finger raise.

Rule 316. Drawing shall be stopped in all adjacent finger raises around the "pack-up" or "hang-up" finger raises to prevent movement while charging explosives.

Rule 317. Blasting of the "pack-up" or "hang-up" finger raises shall be closely supervised.

Rule 318. Explosives shall be securely tied to blasting sticks. Adequate length of blasting sticks shall be used in positioning the charge. When a detonating fuse is used, it shall be long enough to reach the collar of the draw point where the blasting cap and fuse are to be connected. Where igniter cord is used, it shall be long enough to reach the collar of the draw point.

Rule 319. All access from any other drift or level that provides entrance to the finger raise to be blasted shall be well guarded.

Rule 320. When it is necessary to enter "pack-up" or "hang-up" raise, adequate precautionary measures shall be taken.

B. Slusher Operations

Rule 321. When slushing, the cable shall always be guided by sheaves, pipe or steel and the like.

Rule 322. Slusher motor switches shall be labeled before any work is done on or around the machine.

Rule 323. It shall be prohibited to stand near or walk along cables when the scraper is in motion.

Rule 324. Operators shall be required to keep cable winding straight and running freely through the sheaves.

Rule 325. Cover guards shall not be removed except when it is necessary for repairs and shall be replaced and properly fastened before the machine is operated.

Rule 326. Slushers that are not secured by based bolts shall be firmly studded down or wedged under band-holes.

Rule 327. Slusher operators shall be required to report immediately to the Supervisor-In-Charge on any water accumulation in short ore passes.

C. Miscellaneous Rules in Block Caving Operations

Rule 328. In case the subsidence zone of a block caving operations falls on a flat area or a depression where there is a possibility of water being accumulated, the following shall be followed:

Regular back filling of the subsidence shall be undertaken to maintain a minimum of 4% gradient over the subsidence area to drain off rainwater.

Tailings and slurries shall not be used as backfill on subsidence area.

Pipe-outs found within the subsidence area shall be filled immediately.

Unauthorized persons and vehicles shall be restricted from the subsidence area.

Adequate supply of lifelines shall be kept at the immediate vicinity of the subsidence area.

Periodic survey regarding rate of subsidence, pipe outs, cracks and other significant observations in the area shall be undertaken. Records shall be kept to serve as reference by all concerned.

RAISING

A. Alimak Raising

Rule 329. In raising, the following shall be maintained/provided:

- top deck clear
- cage clean
- climbing shoes in the cage
- safety belt attachments in cage
- emergency tools in cage

Rule 330. It is prohibited to stand or work on the top deck of the climber at the bottom of the raise.

Rule 331. Hose reel motor and control shall be tested before ascending.

Rule 332. When ascending or descending the raise, employees shall stay only inside the cage.

Rule 333. When ascending the raise, the following shall be observed:

- Check and clean out racks and gear teeth
- Bar down
- Check all rock bolts

Rule 334. When barring down the face, any large rocks on the top of the Alimak cage shall be brought down to the bottom.

Rule 335. When installing racks, the following shall be observed:

- Keep the racks as closely in line as practicable as possible.
- Keep the racks securely bolted into place.
- Inspect the racks and rockbolts regularly.

Rule 336. Tools, explosives or any other materials shall not be carried on top deck of the climber.

Rule 337. The face shall be checked for misfires and bootlegs before starting to drill.

Rule 338. Adequate ventilation shall be provided to the face.

Rule 339. Header plate at the topmost section of the guide rack shall be provided.

Rule 340. Preventive maintenance shall be conducted by authorized servicemen on the climber and its accessories regularly.

Rule 341. The climber down the raise shall be tested by gravity at least once a week.

Rule 342. Only authorized operator shall be allowed to operate the raise climber.

B. Raise Boring

Rule 343. Raise bore stations shall be adequately ventilated.

Rule 344. Cuttings (muck) shall not be allowed to accumulate for a long period of time to avoid secondary blasting due to compaction.

Rule 345. On soft or moderately hard ground, the raise bore shall be grouted or concrete lined to avoid slabbing or caving of the walls.

Rule 346. Collar shall be covered with rigid screen and fenced.

FUELLING AND SERVICING

Rule 347. The Regional Director shall be notified in writing of the location and details of proposed automotive diesel fuel service and storage facility before such are to be installed/constructed in the underground mine.

Rule 348. The manager shall ensure that the location, method of construction and means of ventilation of a diesel fuel service facility shall reduce the risks and conform with pertinent laws.

Rule 349. No installation/construction of underground fuel facility shall be allowed unless a risk assessment has been conducted by the company and approved by the Regional Director.

Rule 350. The manager shall ensure that the fuel being transported and stored underground in containers are free from leaks and properly secured.

MINE RESCUE ORGANIZATION

Rule 351. Mines employing fifty (50) or more men underground at any one time shall maintain a mine rescue organization capable of sustaining operation during an emergency until outside help or assistance is available.

Rule 352. A mine establishing a rescue organization shall provide and maintain Mine Rescue station with a minimum of 5-unit self-contained oxygen breathing apparatus of at least 2-hour duration and adequate auxiliary apparatus, equipment and other maintenance facilities.

Rule 353. A mine rescue team shall maintain a minimum of 12 fully trained men.

Rule 354. A regular member of a mine rescue team shall possess the following qualifications and shall be certified by the Bureau:

Not less than 21 years nor more than 45 years in age.

Must pass a rigid physical examination.

Must pass the basic mine rescue course.

Must have previous training in First Aid.

Rule 355. A mine maintaining a Mine Rescue Organization shall prepare and make available an up to date emergency flow chart that would define the emergency course of action.

Rule 356. A refuge chamber or chambers or other places that can be safely designated as escape bases shall be provided underground. Refuge chambers shall be provided with the necessary life sustaining equipment and supplies.

Rule 357. All neighboring mines shall organize a Mutual-Aid Mine Rescue Emergency Program.

GENERAL PROVISIONS

Rule 358. All other safety and health rules and regulations cited elsewhere in this Order which are applicable to surface mining operations are hereby embodied.

Rule 359. The vertical height of working benches shall be kept at the maximum reach of the shovel/loader being used.

Rule 360. The manager shall ensure that the design, layout, construction and maintenance of any dump or stockpile shall take into account the following factors to minimize the potential instability:

- The nature of material dumped;
- The size and weight of equipment used;
- The site condition including stability of the area where it is sited;
- The drainage condition; and
- The atmospheric conditions.

Rule 361. The manager shall ensure that no quarry/open pit is mined so close to the boundaries of the tenement in order to provide adequate space to install protection against inadvertently access by any person after such is abandoned.

Rule 362. The slope and height of benches shall be governed by the competence and stability of the ground such that the danger of sudden slide is minimized.

Rule 363. A spotter or person directing the movement of equipment during night-time shall be provided with illuminating device such as flashlight, miner's lamp, reflectorized vest and gloves or any combination thereof.

Rule 364. When resuming excavations after heavy rains and blasting, all banks shall be inspected for cracks or ground movement which may indicate the beginning of a slide or rock sloughing and that proper markings shall be placed thereat.

Rule 365. It shall be prohibited to work on or under any overhanging bank. The overhang shall be brought down first before any kind of work is started.

Rule 366. If it is necessary to work above others, precautionary measures shall be observed and the persons working below shall be properly notified.

Rule 367. It shall be prohibited to stay or pass under a raised bucket or under any suspended load.

Rule 368. In coming near or working around operating equipment, an employee shall make known to the operator of his presence in the area or shall stay within the lines of sight of the operator.

Rule 369. Spare or brokendown equipment shall not be left unattended near the toe or crest of a bench and unstable ground.

Rule 370. Employees working within the mine/quarry and its immediate vicinities shall be made aware and acquainted with the mine's standard blasting procedures.

Rule 371. Personnel of other departments servicing the pit area shall be required to coordinate with the mine/quarry supervisor on duty. Servicing of any equipment shall be conducted in areas not affected by operation or free from other moving equipment.

Rule 372. No tourists, sightseers and other visitors shall be allowed to enter a mine area without proper authorization and the necessary escort. There shall be at least one escort for the group.

Rule 373. Whenever open pits are excavated through abandoned underground workings, cavernous formations or in close proximity to existing underground workings, the manager shall ensure that appropriate precautions are undertaken and written safe working procedures are to be followed.

DRILLING OPERATIONS

Rule 374. When it is necessary for both the operator and helper to leave the equipment, the machine shall be shut down.

Rule 375. In the event of a power failure in the pit, the control of the drill shall be turned to the neutral position until power is restored.

Rule 376. When drilling near the crest of a bank, the drill shall be oriented at right angle and not parallel to the bank.

Rule 377. Unauthorized persons shall not be permitted to stay on the platform while the drill is in motion.

Rule 378. Electrical and power cable repairs shall be done by authorized electricians only.

Rule 379. When traveling up-ramp or down ramp, the front end or mast end of machine shall be on the uphill side of the grade. A dozer and towing cables shall be provided to support the drill during ramp travel.

Rule 380. Staying or resting under the drill at any time shall be strictly prohibited.

Rule 381. Climbing the mast while the drill is in operation shall be prohibited. Mechanical defects or unsafe conditions of the equipment shall be reported to the supervisor immediately.

Rule 382. The drill shall not be moved when no communication / coordination is established between the operator and his helper.

Rule 383. When the drill is traveling under conditions of poor visibility, all movements shall be guided by a helper or supervisor.

Rule 384. When operating near power lines, the drilling machine and its mast or derrick shall not be posted closer than 6 meters horizontally and 1.5 meters vertically from such lines.

LOADING OPERATION

Rule 385. Shovels shall not be moved up or down a ramp, between benches, under power lines, or any dangerous place unless the pit supervisor is directing the work. The brake shall always be checked before the equipment is moved up or down the ramp. A dozer and towing cables shall be provided to support shovels during ramp travel.

Rule 386. Before the shovel is moved, the area shall be cleared of cable and equipment.

Rule 387. The power cable shall not be hung over the bucket teeth. Rope slings/cable booth shall be used and care shall be taken so as not to subject the cable to great tensile force.

Rule 388. It shall be prohibited to work between the shovel and the bank unless the shovel has been moved far enough from it.

Rule 389. The shovel shall be moved to a safe distance from the bank when not in use or under repair.

Rule 390. The bucket shall be on the ground when a shovel is not in operation but care must be taken so as not to hit the power cable.

Rule 391. Banks shall be properly trimmed to ensure safety and stability.

Rule 392. The shovel dipper shall not be used to push trucks or other equipment.

Rule 393. Empty or loaded bucket shall not be swung over personnel and cabs of equipment. A shovel shall never be traveled with a loaded dipper.

Rule 394. Fixing misaligned hoist cable on the hoist drum shall be done by shovel mechanics unless other shovel crews are authorized to do the job. It shall be done with extreme care and proper coordination with the operator, if in doing, the drum needs to be rotated.

Rule 395. When misfires are discovered during excavations, the shovel operator shall stop operation and notify his supervisor immediately. The shovel shall not be allowed to resume operation unless the misfires are safely removed.

Rule 396. Properly labelled and color-coded emergency switch shall be provided below the counterweight of the shovel for emergency stopping.

HAULING OPERATION

A. Truck Haulage

Rule 397. Trucks shall be inspected at the beginning of each shift and during service periods. Any defects shall be reported immediately to the supervisor.

Rule 398. Gauges shall be in the operating range after start up and these shall be checked often during operation.

Rule 399. When travelling on a haulage road at the start of a shift operators shall be required to drive slowly and check road/s for conditions and for any hazards.

Rule 400. The road shall be cleared before the truck is moved. The unit shall not be moved unless warning signal is given.

Rule 401. A minimum safe distance of 30 meters with a speed of 30 kph shall be observed in following another truck on a downgrade under normal conditions.

Rule 402. Trucks shall not be parked closer than 20 meters behind or in front or 2 meters beside other trucks.

Rule 403. Right-hand traffic shall always be maintained unless otherwise directed or driving at the left side of the road is justifiably and safely warranted.

Rule 404. It shall be prohibited to run over electric cables, rocks or other obstructing materials. Operators shall remove or ask others to remove any obstruction that may pose hazards once discovered.

Rule 405. Parked vehicles shall have the parking brakes on at all times. When on a grade, the front wheels shall be directed to the toe with the tires properly blocked.

Rule 406. Headlights shall be dimmed when approaching vehicles during nighttime.

Rule 407. It shall be prohibited for operators to enter or leave the cab while it is being loaded.

Rule 408. Dumping over a bank shall be prohibited unless it is provided with a safety berm or protective ridge or a spotter is employed. Designated dumping area shall be elevated at least 1% towards the crest.

Rule 409. Extreme caution shall be exercised when backing the truck to the edge of dump.

Rule 410. When in a dumping position, the truck shall be positioned at right angle to the dump with both rear wheels on the same level or at an equal distance from the safety berm. After dumping, the operator shall not start to travel unless the dumping carriage is completely down.

Rule 411. Operators shall be required to watch the swing radius of the shovel when backing up for loading position. If a spotter is employed, the operator shall wait for his signal.

Rule 412. Hauling trucks shall not be used to push or to pull other vehicles.

Rule 413. Empty trucks and light vehicles shall yield the right of way to loaded units or heavy equipment.

Rule 414. It is prohibited to overtake or pass a vehicle at curves and intersections. Overspeeding shall be avoided and speed limits of trucks in mine/quarry haulage roads shall be fixed.

Rule 415. Width of a permanent two (2) lanes haulage road shall not be less than three (3) times the width of the widest hauling truck.

Rule 416. All haulage roads shall be provided with safety berm with a height not less than the height of the cam or hub.

Rule 417. Spotters shall be required to guide and to occupy position not less than 4 meters away normal to the cab and at the driver side before giving the signal to dump.

B. Aerial Tramways

Rule 418. Buckets shall never be overloaded.

Rule 419. Bucket shall be well spaced to allow proper handling.

Rule 420. Carrier grips and loading dock mechanism shall be inspected at least once each shift.

Rule 421. Brakes of the prime mover or steeply pitching section shall be of positive action type and shall be inspected regularly and properly maintained.

Rule 422. Ropes and supports shall be inspected at least once a month or as often as necessary.

Rule 423. The tripping device at the dumping point shall always be kept properly adjusted.

Rule 424. Diameter of track cable connections shall be as close as possible to the diameter of the rope to prevent derailing of buckets.

Rule 425. Swing guards shall be placed to prevent buckets from swinging, hitting towers and from falling.

Rule 426. It shall be strictly prohibited to ride in aerial bucket.

SURFACE ELECTRICAL CABLE

Rule 427. Trailing cable shall not run across the loaded blasthole areas.

Rule 428. Climbing on any cable arch or pole when the power cable is energized shall be strictly prohibited.

Rule 429. Trailing cables shall be inspected daily for cuts, bruises, breaks or any defects. Any damaged parts shall be reported and repaired immediately.

Rule 430. Trailing cables shall be placed or laid out in such a way that these are protected or free from rock falling from the bucket of the shovel, spills from trucks, being run over by equipment or being covered by mud or muck.

Rule 431. Appropriate high voltage resistant gloves and other safety gears shall always be worn whenever handling power cables.

Rule 432. Trailing cables shall de-energized first before pulling out from mud/muck or before being placed in cable arches or cable poles.

Rule 433. Trailing cable connected to switch houses shall be treated as energized until ascertained as not.

Rule 434. Switch houses shall be provided with signs or tags denoting the equipment to which these are connected.

Rule 435. Splice boxes and trailing cables shall not be allowed to be buried in mud or submerged in water.

Rule 436. Suspended trailing cable shall have enough clearances over all equipment passing under.

Rule 437. Any excess live trailing cable shall be arranged in a figure of eight (8).

HYDRAULICKING

Rule 438. The area within which hydraulicking is being carried out shall be marked with signs posted around it and unauthorized entry of person on the area is prohibited.

Danger signs shall be posted around tailings dump or siltation pond.
Freshly formed banks of clay shall be sectioned off by warning signs.
Dumps and ponds constructed with earth banks shall be fenced off.

Rule 439. Before any hydraulic monitor is put into operation, all persons within the radius of the water jet shall leave the area. Only employees directly concerned with the operation of the monitor shall be allowed near in such during operation.

Rule 440. All work involved in shifting or repairing the monitor, replacement of the nozzle, as well as any work done within the radius of the water jet, shall be carried out only after the stop valve on the water line has been shut-off.

Rule 441. The supply of water to the monitoring device shall be shut-off at each pause in operation, and the nozzle of the jet fixed in a position safe for all the persons working around it.

Rule 442. The belts at the joints in a pipeline shall never be tightened while pressure is on.

Rule 443. It shall be prohibited to leave an operating hydraulic monitor without control or to place the hands, or any other part of the body, and object in contact with jet stream.

Rule 444. No water supply pump or tailings pump shall be started until the chief operator of the hydraulic installation gives the order, after first sounding the start-up warning signals.

Rule 445. Each high pressure hydraulic installation shall have a stop valve in its main water supply line at a distance not greater than fifty (50) meters from the monitor.

Rule 446. To ensure that hydraulic installation will not burst under the pressure of the water, the installation shall be subjected to a preliminary pressure test prior to commissioning. During operation, the pressure of the water shall be constantly checked. Each hydraulic monitor shall be provided with pressure gauge.

Rule 447. Test pressure to which hydraulic installations are subjected prior to commissioning shall exceed the normal operating pressure by thirty (30) percent for the piping and eighty (80) percent for the water supply pumps and tailings pump, but never less than five (5) atmospheres.

Rule 448. It shall be prohibited to come close to the foot of a steep face or walk along the top edge of a working face.

Rule 449. Distance from the hydraulic monitor to the face shall not be less than the height of the face. When working a dense ground liable to cause falls of large lumps, distance shall be at least 1.2 times the height of the face.

Rule 450. When working a face from the upwards, overhang that starts to develop in the ground shall be cut down in time with the water jet.

Rule 451. Large rocks and boulders exposed as the supporting ground is washed away shall be carefully and gradually washed down the slope.

Rule 452. Movement over water-deposited banks shall be prohibited until compactness and strength of the ground has been confirmed by thorough checking.

Rule 453. Electric power shall be supplied to a floating dredge pump installations by means of a trailing cable laid on separate floats or on the floats serving as support to the pulp line. The floats shall:

- not overturn or sink when four (4) workmen stand on them at a time;
- be provided with footwalks on both sides and fitted with hand rails at least one meter high; and
- be illuminated during the hours of darkness.

DREDGING

Rule 454. All safety rules regarding the operation of chain-and-bucket excavations shall apply.

Rule 455. During service, each floating dredge pump installations shall have at least two (2) rowboats in good condition, one of which shall be floating and ready. The life saving appliances shall be hanged conspicuously around the sides of floating dredge pumps.

Rule 456. A rope line shall be provided along the sides of the dredge pontoon at a convenient distance above the water line for grasp line of anyone who may accidentally fall into the water.

Rule 457. At least two (2) sets of life-saving appliances per twenty (20) meters of deck length shall be placed at conspicuous points along the sides of the dredge and shall be provided with sign boards.

Rule 458. Each dredge shall be served by at least two (2) row boats ready with oars, one of them floating at the side of the lantern mounted at the bow.

Rule 459. Before any operation on a dredge is started, the corresponding signals shall be given such as starting-up, shutdown, shiftover, etc.

Rule 460. While the dredge is in operation, it shall be prohibited to:

- Pass through the bucket carrying frame or move along it;
- Climb unto a bucket or chain link, nor enter the discharge batch, or remain at the bow of the pontoon or near the bucket slot when the bucket-chain frame is raised high; and
- Use of mooring ropes to reach the bank or over the pontoon or gangway to the bank.

Rule 461. A trap or gangway of firm construction shall be suspended between the dredge and the bank to facilitate movements.

Rule 462. No gangway or trap shall be raised or lowered when there is a person on it.

Rule 463. A gangway fitted with handrails shall be provided for movement of personnel to and from the roof and upper deck.

HEAVY EQUIPMENT OPERATION

Rule 464. Only authorized and qualified personnel shall be allowed to operate heavy equipment. Authorized personnel shall be a holder of Land Transportation Office driver's license.

Rule 465. Only duly qualified and authorized persons shall be permitted to assist, operate and maintain any machine or equipment. Equipment operators shall be made responsible for the protection of men and equipment within their scope of jurisdiction.

Rule 466. When trackless equipment are used in underground mining, the manager shall ensure that employees:

wear an outer vest or webbing harness with reflective material on their chest and back; or
have panels or strips of reflective material securely fastened to the clothing on their chest and back.

Rule 467. All vehicles in a mine so far as is practicable shall be fitted with roll over protective structures, blinkers and signal lights.

Rule 468. On-the-ground and on-the-cab inspections shall be conducted prior to starting and operating the unit.

Rule 469. Inspection of the conditions of all visible machine parts shall only be done when the machine is not in motion.

Rule 470. When refuelling, the operator shall shut off the engine and shall comply with the no smoking policy.

Rule 471. The operator shall follow strictly the Preventive Maintenance Schedule of each equipment in accordance with the procedure set by the manufacturer.

Rule 472. The operator shall immediately report any defective or faulty operation.

Rule 473. It shall be prohibited to clean and to apply oil and grease, adjust or repair any equipment while it is in operation.

Rule 474. Only authorized mechanics shall repair or make any adjustments to the equipment.

Rule 475. When repairing equipment, it shall be properly locked-out to prevent it from being set in motion.

Rule 476. The operator shall tag/lock operator's panel board whenever repair is being done on the unit.

Rule 477. No employee shall be allowed to undertake servicing of the battery unless equipped with the appropriate safety paraphernalia.

Rule 478. Before starting a repaired equipment, an inspection shall be done to make sure that all tools used are removed, all working parts of the machine are free to move without damage, and that nobody will be injured when the machine is set in motion.

Rule 479. Whenever washing/cleaning services is done in the unit:

always shut-off the engine before cleaning.

never clean a hot engine.

always cover the starter, alternator, voltage regulator and electrical boxes when washing the unit with pressure washer.

Rule 480. The operator shall never start the machine unless

the area near the machine is clear.

all covers are installed.

the park brake system is applied.

the transmission control lever is in the neutral position.

Rule 481. The operator shall always travel the required speeds in congested areas-

Rule 482. It shall be prohibited to use the machine or equipment other than its intended purpose.

Rule 483. The operator shall never leave the unit except in an emergency situation.

Rule 484. When parking on a sloping ground, operator shall always position the unit towards the sidewall, block the wheels, and switch off engine.

Rule 485. The operator shall always tag the steering control lever when a component has been removed from the machine.

Rule 486. No one shall be allowed to stand in the area of the center pivot (articulation hinge) unless the frame lock is fitted.

Rule 487. The operator of the trackless unit shall ensure that the transmission is always engaged while the unit is in motion.

Rule 488. A trackless unit shall not be parked and left unattended unless

The engine or power supply has been switched off; and

The parking brake has been applied;

Rule 489. Before operating the machine, the operator shall check all safety devices thoroughly to ensure that the machine is in good operating condition.

Rule 490. Electrically driven machines shall be connected to the electrical supply via circuit breaker.

Rule 491. The operator shall always park the machine properly in designated area.

Rule 492. No employee shall be allowed to place any object in the operator's pit which may hinder or prevent access to safety and/or operating controls.

Rule 493. The operator shall always keep the machine clean at all times, especially from fuel, grease, oils, rags and and other combustible materials.

Rule 494. The operator shall always check fire extinguisher and/or fire prevention appliance before operating the equipment.

Rule 495. The operator shall always positioned the machine in an area that has been carefully barred down and/or rockbolted.

Rule 496. It shall be prohibited to get on or off any moving vehicles or equipment. Proper procedures in getting on or off equipment shall be observed.

Rule 497. No one shall be allowed to go near rotating drivelines, pinch points and the necessary machine guards shall be installed.

Rule 498. Transport of personnel to workplaces by the use of the tractor with trailer shall be allowed, provided that :

- Sitting capacity of the trailer is observed;
- No assorted scraps or equipment parts are loaded on the trailer;
- Only handtools (i.e. wrench/pinch bar/shovel/ bolts/bearings) are allowed to be transported along with the workers;
- Handrails, seats with backrest shall be provided on the trailer.

Rule 499. Only two riders shall be allowed at the tractor's rear.

Rule 500. When the tractor is utilized to transport materials/scraps with the use of trailer, the following shall be observed.

- Reduce speed when going upgrade or downgrade;
- Maintain the maximum speed of 20 km/hr;
- Towing bar pin is properly checked and secured.
- Load of the trailer should never exceed the gross weight (2.8 tons) of the tractor.

Rule 501. Prior to starting the engine, the "Operators" shall make sure that the MCM is in good-running condition and the areas around and underneath the vehicle are properly checked.

Rule 502. During operation of "MCM", the operator shall ensure that:

- no person shall be allowed within the frame or hinge area;
- no person is allowed to board on or get off the vehicle while in motion;
- never leave the vehicle while the engine is idling.
- never use the safety/parking brake to stop the unit except in an emergency situation;
- when going downgrade, always shift to low gear.
- always shift to neutral gear when the parking brake(s) is applied when discharging;
- after discharging and/or at the end of the shift, always clean and wash the mixer drum.

Rule 503. During parking, the operator shall park the unit properly, set the parking brake and the transmission gear to neutral and allow the engine to idle for at least 1-2 minutes before shutting it off.

Rule 504. Before towing the "MCM" for repair, the operator shall ensure that:

- both front and rear drivelines are disconnected;
- wheel brake is released mechanically by loosening the locknut and thread screw at the backplate of the wheel brake cover.

Rule 505. Operator shall always reset the safety brakes after towing the unit at the repair shop.

Rule 506. The operator shall always disconnect the frame lock before operating the machine.

Rule 507. The operator shall never use the steering lever as a handhold when mounting or dismounting the machine.

Rule 508. Operator shall always sound the horn before starting the engine.

Rule 509. Except the operator and the needed spotter, no one shall be allowed to ride in the equipment.

Rule 510. The operator shall lower the dump box to the “carry” position before moving.

Rule 511. The operator shall always use seatbelts.

Rule 512. The operator shall always install the tailgate locking bar and a safety support tube before attempting to work in the dump box area with the box raised.

Rule 513. Diesel locomotive and Load-Haul-Dump (LHD) shall be used under the following conditions:

the fuel injection system shall be locked to prevent unauthorized charging of air-fuel ratio (approximately 20:1, i. e., the engine shall use twenty kilograms of air in burning one kilogram of fuel).

the fuel shall have a flash point of 66° C or higher and contain less than 0.12% sulfur by weight.

a scrubber cooling system or the like shall be provided for the exhaust gas of the engine.

provisions shall be made to dilute the exhaust gas with air to not more than 100 parts per million by volume of carbon monoxide before it is discharged into the surrounding atmosphere.

the diesel equipment shall be restricted to places where adequate ventilation is maintained.

the quantity of air supplied underground shall be adequate to dilute all toxic constituents of the exhaust gas to tolerable limits.

Rule 514. No LHD machines shall (~~not~~) be operated without fire extinguishers.

Rule 515. LHD operators shall not be permitted to leave the unit unless the engine is off, the parking brake is set, the key is removed and the bucket is pressed to the ground.

Rule 516. When parking LHD on an incline, the machine shall be directed towards the bank or rib and wheels blocked.

Rule 517. It shall be prohibited to stand in the "V" area or pivot section between the front and rear frame of the LHD while the engine is running.

Rule 518. Any defect during pre-start checking of the LHD engine shall be reported immediately to authorized personnel.

Rule 519. The operator shall ensure that the pump is set-up on a firm ground.

Rule 520. The operator shall always level the machine horizon-tally and lock the support legs before shotcreting.

Rule 521. The operator shall install warning signs to close the working area from general traffic.

Rule 522. The operator shall always secure all lever couplings with safety pin to ensure that such cannot snap open.

Rule 523. The operator shall always maintain that the grate on the hopper is bolted or pinned in a closed position to restrict access.

Rule 524. Whenever maintenance shall be performed inside the hopper, the operator shall:

- switch off the machine.
- check both hydraulic pressure gauges for zero readings.

Rule 525. The operator shall never let the delivery hose kink or buckle.

Rule 526. Except the nozzle man, no person shall be allowed near the concrete discharge end of the pipeline during shotcreting.

Rule 527. The operator and nozzle man shall follow the underground standard communication signals.

Rule 528. In cases where shotcreting has to be stopped or interrupted, the operator shall lubricate the line before resuming the activity to prevent clogging of the discharge line.

Rule 529. Whenever blockage occurs, the operator shall stop pumping immediately, reverse the pumping cycle for several strokes, switch off the machine and release all pressure on hydraulic gauges.

Rule 530. When clearing a clogged line, the operator shall ensure that no person is within twenty (20) feet minimum distance radius from the clogged line.

Rule 531. Only the nozzle man shall be authorized to give signal to the pump operator during shotcreting.

Jumbo Drills

BEFORE AND DURING TRAMMING

Rule 532. The operator shall regularly conduct ocular inspection on the following:

- loose bolts, connections and other defects;
- the central articulation and cylinder pins are in place;
- all guards and protective devices are firmly in place;
- check the tires for wear, cracks and other defects;
- check the wheel nuts for torque setting;

check the clip assembly on the rims.

Rule 533. The operator shall ensure that the position of the boom is horizontal and centered with the front chassis centerline.

Rule 534. The operator shall never swing the boom unless all four stabilizing jacks are set firmly on the ground.

Rule 536. The operator shall always adhere to the grade and side limitations of the jumbo drills. For safe operation in forward reverse direction, the maximum allowable grade shall be 15 ° and the maximum allowable side slope shall be 5° when the machine is fully articulated.

Drilling

Rule 537. Before starting the powerpack, the operator shall ensure that all control levers are in neutral position.

Rule 538. The operator shall ensure that no person is within the danger area before moving the boom.

Rule 539. For optimum stability and perfectly parallel holes, the chassis shall be on line with the gallery being drilled.

Rule 540. The operator shall never start a motor while it is underloaded.

Rule 541. The operator shall always use the boom extension when approaching the drill feed to the face instead of the feed crowd cylinder.

Rule 542. Boom extension shall always be in the position, which allows the drill feed to be rotated/positioned below the boom, and maintained in such position until the drilling pattern has been completed.

Rule 543. Before drilling, the operator shall ensure that:

the position and direction of the drill is correct.

the drill feed is firmly placed against the face and maintained in that position throughout the drilling operation.

Rule 544. The operator shall always ensure that the drill feed is always in contact with the face.

Rule 545. In correcting drilling direction, operator shall align the rod in the rod guides.

Rule 546. To prevent oil overheating, the operator shall position the feed lever in the neutral position before positioning the boom to drill the next hole.

Rule 547. The operator shall resort to manual percussion only when the drill steel is jammed in the hole.

Rockbreakers

Rule 548. The operator shall maintain a constant down force on the breaker in line with the tool.

Rule 549. The operator shall position the tool at a 90° angle to the surface of the rock and in no case that the boom shall be used to hold the breaker in position on the rock.

Rule 550. The operator shall not operate the breaker with the hydraulic cylinders either fully extended or retracted.

Rule 551. The operator shall never use the breaker tool in prying, picking or lifting.

Rule 552. The operator shall never change the pressure setting of any valves unless authorized instruction has been obtained.

Rule 553. The operator shall observe caution when draining hot fluids from the machine.

Rule 554. The operator shall never operate the machine if any rotating part is damaged.

Rule 555. A screen guard shall be provided between the operator and grizzly to protect the operator from fly rocks during breaking operation.

Rule 556. No breaking shall be allowed during dumping of ore by LHD/LPT operator.

Rule 557. The operator shall always position the rock breaker's boom away from the grizzly after breaking.

Rule 558. The operator shall ensure that the moil tool shall not hit the grizzly bars or grizzlies during breaking.

Rule 559. Rockbreaking operation shall be temporarily stopped when overheating of the unit occurs and such shall be reported immediately for repair.

Rule 560. No secondary blasting shall be allowed at the dumping point when the breaker bogs down.

Mobile Rockbreaker

Rule 561. The operator shall never remove any element of the exhaust system or any safety covers and devices from the machine.

Rule 562. When servicing the equipment, the operator shall always switch off the unit and extend the jacks to stabilize the unit.

Scrappers, Crane, Graders and Loaders

Rule 563. When the units are not in use, the blade, buckets or rippers shall be lowered on the ground.

Rule 564. Operators shall be required to be alert on the danger of slide or falling rocks when cleaning a toe.

Rule 565. Back-up lights shall be in good condition when working at night.

Rule 567. The foot brake on tractors and hand brakes on graders and loaders shall be locked when parked on an incline.

Rule 568. As far as is practicable, graders shall be operated in the same direction as traffic flow.

Rule 569. When maneuvering on inclined ground, the blade or bucket shall be kept as low as possible.

Rule 570. Unauthorized persons shall be prohibited to ride on dozers, graders or loaders.

Rule 571. All units shall be parked in an area free from slides and other hazards.

OFFSHORE MINING

Rule 572. All requirements, rules and regulations as imposed by the Maritime Industry Authority (MARINA) and other concern government agencies shall apply.

Rule 573. Vessels shall be equipped with lifesavers, jackets and lifeboats to a total of at least one and a half times the number of persons who are on the vessel.

Rule 574. Offshore operations shall have at least one (1) standby motorboat available which is capable of being launched fully loaded and shall accommodate at least one and a half times the number of persons on the vessel for emergency purposes.

Rule 575. Adequate and suitable firefighting equipment shall be made available.

Rule 576. All supervisors and workers shall be trained on the proper use of firefighting equipment.

Rule 577. Vessels shall always carry along full-time occupational health nurse, part-time occupational doctor and first aiders as may be deemed necessary by the Director and shall be provided with medicines, equipment and facilities.

Rule 578. A potable and adequate supply of drinking water shall be provided and maintained, conveniently accessible and clearly marked as drinking water for all persons.

Rule 579. Where diving operations are carried out, appropriate first aid and rescue equipment shall be provided.

Rule 580. It is prohibited to possess or acquire explosives without the proper authorization from the Philippine National Police or other proper authorities.

Rule 581. No person shall be allowed to use a dredge in any mining operation unless authorized by the Bureau.

Rule 582. An application may be filed with the Bureau for approval to use a dredge in any mining operation provided that the applicant shall submit:

Plans showing the location of the dredging operation together with the general layout of the dredging proposal.

Design and construction details of the dredge including;

Structural descriptions;

The means to be used to maneuver the dredge from place to place in the dredging operation;

The means to be used to break out and raise the products of the dredging operation;

The maximum depth of the water at which the dredging operations are to be carried out.

Design details of any mooring or anchoring apparatus to be used in carrying out the dredging operation;

Details of the loads used in any design, stability and buoyancy calculations;

Details of any ballast requirements or limitations including any restrictions on the storage of free liquid, and the maximum and minimum draught of the dredge;

Details of the means of access from the tank to the dredge;

Buoyancy and stability of the dredge under all operating condition;

The results of buoyancy and stability tests; and

Details of any apparatus obtained from concerned government agencies.

Rule 583. Prior to any repairs, modifications or alterations to be carried out on a dredge that may affect its strength, buoyancy and stability, the company shall obtain/submit the following:

Approval from the Bureau to carry out such work;

Plans, specifications, drawing and design calculations are submitted to the Bureau which indicate the extent and nature of such work;

Approval from the concerned government agencies.

Rule 584. All life saving equipment shall be kept in a conspicuous place that is easily accessible and shall be immediately repaired or replaced when it is damaged or lost.

Rule 585. No employee shall be allowed to interfere or tamper with any life saving equipment provided on the dredge except :

For the purpose of saving lives;

In the course of the conduct of a training exercise approved by the manager; or

As otherwise authorized by the manager.

Rule 586. The manager shall ensure so far as is practicable to pose warning signs in conspicuous places to warn persons of danger from the head lines, side lines and other drive lines or mooring lines.

Rule 587. The manager shall ensure that each anchor for a head line, side line or mooring line is of adequate strength.

Rule 588. Each dredge shall be served by at least two (2) row boats ready with cars, one of them floating at the side of the lantern mounted at the bow.

Life Saving Appliances

Rule 589. A suitable stand-by vessel shall always be available and;

Stationed in the vicinity of the dredge;

Ready to render assistance in the event of an emergency on or near the dredge;

Capable of accommodating safely on board all employees who may need to be rescued from the dredge;

Equipped if necessary with a rescue or pick-up boat suitable for safely retrieving employees from the water by day or night.

Rule 590. Whenever it is not necessary to provide a stand-by vessel either on the dredge or on a vessel alongside, a rescue or pick-up boat shall be provided.

Rule 591. Until such time the emergency shelter accommodation or the living accommodation has been installed and is suitable for use, no person shall remain on the dredge unless :

Safe means of access and egress are provided and maintained between the dredge and a suitable vessel/s; and

The said vessel/s are stationed immediately alongside the dredge.

Rule 592. Where the means of access or egress to a vessel alongside the dredge has to be removed, the number of employees left on the installation shall not normally exceed the capacity of the available accommodation on the dredge or the capacity of the survival craft and lifecraft as mentioned in Rule 574.

Rule 593. When employees are allowed to live on the dredge, such shall be provided with motor-propelled survival craft which are capable of being safely launched fully loaded and of accommodating in aggregate at least one-and-a-half times the number of employees who are on the dredge.

Rule 594. Where sufficient lifecrafts are provided to accommodate the total number of employees on the dredge, the number of motor propelled survival craft shall be sufficient to accommodate in aggregate the number of persons on the dredge.

Rule 595. The painter or rope of every inflatable lifecraft which is not davit-launched shall have external and secured to a strong point on the dredge.

Rule 596. Survival craft and lifecrafts shall be manufactured based on International Standard or conform with the specification standard set by the MARINA.

Rule 597. Suitable lifejackets shall be provided to employees, to a total of at least one and a half times the number of employees or as required by the MARINA, who are on the dredge.

Rule 598. All such lifejackets shall be properly maintained and kept readily available for use at a suitable place or places which shall be clearly marked.

Rule 599. Such lifejackets shall be manufactured by a recognized international standard or conform with the specifications set by the MARINA.

Rule 600. Sufficient and suitable lifebuoys manufactured, distributed and installed shall be in accordance with international and national standards.

Offshore Communications

Rule 601. Effective means of communication shall always be provided in the dredge and its stand-by vessel/s and helicopters.

Rule 602. Where possible, there shall be radio or telephone; an alternative means of signalling shall also be provided.

Rule 603. All such equipment shall be used only by a suitably trained and competent operator.

Rule 604. Communication equipment shall be efficient, properly installed, regularly tested and kept in good condition.

Rule 605. Radio-frequency Communication Equipment shall have the frequency conspicuously marked on both the transmitter and the receiver.

Rule 606. Radio-frequency communication equipment shall not affect or be affected by any other signaling equipment in the neighborhood.

Rule 607. In case of electrical storms which could affect the transmission, no radio signals shall be given in which misunderstandings might lead to an accident.

Helicopters

Rule 608. No helicopter shall land or take off from the dredge until radio or visual communication has been established between the helicopter and the dredge.

Rule 609. All practicable precautionary measures shall be taken to ensure the safety of employees on the dredge during the helicopter operations which include:

The provision of any operational information concerning the dredge or any vessel which may be alongside as may be required by the person in charge of the helicopter; and

The control of any activity in the dredge that may endanger helicopter operations.

Rule 610. As practicable as is possible, suitable means shall be provided for ascertaining at any time:

Wind speed and direction;

Air temperature;

Barometric pressure;

Visibility;

Cloud base; and

Cover

Rule 611. Adequate and suitable equipment, in accordance with requirement from appropriate government agency, shall be provided to ensure the safety of the helicopter operations.

Rule 612. Where a helicopter landing area is provided, it shall be located and constructed in conformity with standard required by the appropriate government agency.

Rule 613. Where by reason of the scale of helicopter movements it is necessary in order to avoid danger, the manager shall appoint a competent employee as helicopter landing officer to be responsible for the control of helicopter operations in relation to the dredge.

Rule 614. All employees engaged in the helicopter operations on the dredge or who may be near the helicopter landing area shall be subject to the immediate and effective control of the helicopter landing officer.

Alarms, Means of Escape and Fire Fighting Equipment

Rule 615. General alarm and public address systems shall be provided and maintained on the dredge.

Rule 616. The manager shall institute a system of signals and warning to be used in the event of an emergency and shall take adequate steps to ensure that all employees are familiar with all signals.

Rule 617. The manager shall adopt a sufficient and suitable safe means of escape to abandonment areas which shall be provided with:

the survival craft launching areas;

an attendant vessel; and

helicopter deck

Rule 618. Fire protection devices, fire extinguishing appliances, breathing apparatus and other safety equipment shall be provided in the dredge and escape vessels.

Rule 619. All supervisors and sufficient number of workers shall be trained in the use of fire extinguishing equipment.

Rule 620. An adequate number of employees trained to use the fire extinguishing equipment shall be readily available during all working periods.

Living Accommodations

Rule 621. The accommodation shall be provided with adequate protection from the weather and is constructed of suitable fire resisting material.

Rule 622. The accommodation shall be located so as to minimize noise and special attention shall be given to noise reduction in sleeping quarters.

Rule 623. Sufficient beds or bunks for the number of employees expected on the dredge shall be provided.

Rule 624. An adequate space for employees to hang up their personal clothing and each employee shall be provided with one lockable drawer or locker.

Rule 625. For every bunk, there shall be in each room at least one properly stowed lifejacket.

Rule 626. The employee shall be provided with a separate facility for the storage of working clothes outside the sleeping area.

Rule 627. The manager shall ensure that the employees are provided with a mess hall and galley to cater for at least half the number of employees likely to use the mess hall in any given time.

Rule 628. A sufficient number of receptacles shall be provided at suitable places for the disposal of garbage and other waste.

Rule 629. A sufficient number of toilets and bathrooms shall be provided in the vessel.

Health and First Aid

Rule 630. A suitable provision shall be made for the effective treatment of injured and ill employees.

Rule 631. The manager shall ensure that a sick bay is provided in the dredge to serve the employees who suffered injury or sickness.

Rule 632. Except where medical advice is to the contrary, all employees suffering from other than minor injuries and illness shall be transferred on shore for treatment. Provided further, pending transfer on shore, employees who suffered injuries and illness shall be placed in a sick bay or medical treatment room.

Rule 633. Necessary equipment, such as suitable stretchers, shall always be kept readily available to ensure that the transfer may safely be undertaken.

Rule 634. The manager shall ensure that the dredge has an adequate number of trained first-aider in every shift of the mining operation.

Rule 635. An adequate first aid kit shall always be readily available to be used by the first aider.

Rule 636. The manager shall ensure that the employees are informed of, notices shall be posted in appropriate languages indicating the arrangements for obtaining, first aid treatment, the means of identifying first aid personnel and the location of first aid equipment and facilities.

PREPARATION OF AN EMERGENCY RESPONSE AND PREPAREDNESS PROGRAM

Rule 637. The employer shall ensure the preparation of an emergency response preparedness program prior to commencement of any mining operation which shall contain, among others, the following:

identification of hazards that might disrupt or cause an emergency at the mine;

assess every perceivable risks that may constitute an emergency;

controlling measures that have to be undertaken to prevent or deal with the emergency which shall include,

organization of crisis management group;

the provision of appropriate facilities, vehicles and equipment;

the provision of effective alarm systems;

the development of procedures or protocols to deal with emergencies;

the training of employees in emergency procedures;

the training of employees in fire fighting, mine rescue and recovery and other relevant emergency response functions;

regular scenario simulation to test the response capability;

the continuous review of procedures, monitoring and maintenance of facilities and equipment;

provisions for update and revision of the program in view of any change in mining operation, conditions and rules and regulations.

Rule 638. The employer shall ensure that an emergency drill be conducted quarterly, in order to test the effectiveness of the program.

Rule 639. The employer shall be required to submit to the Bureau, copy furnished the Regional Office, a report on the conduct of the emergency drill as required in Rule 638.

MINE BLASTER FOREMAN

Rule 640. All applicable provisions of the revised implementing rules and regulations of the Explosives Law should also form part of this order.

Rule 641. A blaster shall be duly registered and currently licensed mining engineer; or a Professional Regulation Commission registered mine/quarry foreman.

Rule 642. A blaster shall be required to comply with the following:

conduct or direct the blasting operations which includes the preparation, fixing and firing of charges, and handling of misfires;

take charge of the disposition and safety of explosives, its accessories and magazines;

keep records on the daily consumption of explosives and submit to the Bureau a monthly consumption report in the prescribed PNP form; and

strictly enforce the safety rules and regulations governing the storage, handling and usage of explosives.

CONSTRUCTION OF MAGAZINES

Rule 643. Magazines shall be constructed in accordance with the specifications shown in Appendix H. Location map and plans shall be approved first by the Bureau before any construction starts.

Rule 644. Magazine designed to accommodate fifty (50) kilo-grams or more of explosives shall be of permanent construction and shall be resistant to weather, fire, theft and bullet.

Rule 645. Contractor/Permit Holder/Permittee/Lessee who hired the services of drilling and blasting contractor shall be required to provide magazines for the use of the service contractor during the duration of the contract.

Rule 646. Portable magazines shall be designed to accommodate less than 50 kg. and resistant to elements and pilferage.

Rule 647. Portable magazine shall not be transferred to any location without authorization from the PNP and Regional Office.

Rule 648. Contractors/Permit Holder/Permittee/Lessee who hired the services of drilling and blasting contractor shall be required to provide magazine for the use of the service contractor during the duration of the contract.

Rule 649. Permanent magazines shall have no openings except for entrance and ventilation. Wall vents shall be of the "off-set" type and all vents shall be covered with metal screens or so constructed as to prevent the entrance of persons, animals, sparks and bullets.

Rule 650. A magazine shall always be kept securely locked with at least two (2) door padlocks, whose keys shall be separately kept by the blaster and representative/s from the Philippine National Police.

Rule 651. If a magazine is illuminated electrically, the lighting fixtures shall be of "vapor-proof" and "explosion proof" type, the wires shall be in conduit and the light switch shall be situated on the outside of the building.

Rule 652. Underground issuing magazines shall consist of a separate drive or chamber free from leaks and shall be made of fire-resistance materials. It shall be located in areas safe from all mining operations and far from mine exits.

Rule 653. Each magazine shall have the following additional fixtures:

warning signs;

the interior shall be kept clean and dry;

walls shall be painted white;

the floor shall be provided with matting, preferably wood with no exposed metals; adequate ventilation;

surface magazines shall be provided with lightning arresters, eave on door openings and meshed-wire fence at least 1.5 meters away from the magazine;

adequate fire extinguishers shall be provided outside the fence for surface magazines and on the outside wall for the issuing magazine.

deposit box outside the gate where the flammable materials such as lighters and matches could be deposited

Rule 654. Magazine surroundings shall be kept clear of woods, grasses and other flammable and combustible materials for a distance of 1.5 meters.

STORING

Rule 655. Explosives and blasting accessories shall be stored separately in the following manner:

Dynamite Magazine (Dynamite, detonating cord and Primer)

Blasting Cap Magazine (Blasting Caps, connectors, delay connectors)

Fuse Magazine (Safety Fuse)

Ammonium Nitrate Magazine (Ammonium Nitrate and Slurry)

Rule 656. Explosives shall be piled and issued on a first-in- first-out" (FIFO) basis.

Rule 657. All piles shall have at least fifteen (15) centimeters distance from the walls of the magazine and shall maintain an aisle along the door way.

Rule 658. Height of pile shall be maximized to an equivalent reach of a person.

Rule 659. Capacity of all magazines shall conform with the pre-computed floor area of the magazine.

Rule 660. A maximum of fifteen (15) days supply of explosives shall be stored in an issuing magazine and withdrawals shall only be administered by the blaster.

Rule 661. Fuses shall not be stored underground longer than seventy-two (72) hours unless the storage place is safe and dry.

Rule 662. In underground storage, explosives and accessories shall be stored above the level of the floor or in shelves.

Rule 663. Explosives which have deteriorated overtime shall be properly disposed of in accordance with the manufacturers instruction.

Rule 664. Loose explosives and blasting supplies shall be returned immediately to its proper container inside the magazine.

Rule 665. Underground magazines shall be :

dry and flat flooring;

free from fire and any potential rock fall;

separated from other workplaces;

provided sufficient ventilation and airways.

Constructed on stable ground

Rule 666. Underground magazines shall not be located within the radius of:

100 meters from shafts or other underground magazines;

25 meters from workplaces;

10 meters from raise or winze which is used for personnel accessway; and

50 meters from blasting area.

Rule 667. A notice shall be posted at the entrance of every underground explosive magazine, stating the rate of burning of the fuse used.

TRANSPORTATION

Rule 668. Vehicle transporting explosives shall not be overloaded and in no case shall boxes or packages be piled in such a position that these may easily fall- off.

Rule 669. Vehicles containing explosives shall never be taken inside a garage or shop for repairs or other purposes and shall avoid unnecessary delays or stops during transport.

Rule 670. Vehicles transporting explosives shall stop before crossing railroad tracks or main highways and then proceed with caution and conform to all other traffic safety measures.

Rule 671. When vehicles containing explosives are stopped, the hand brake shall be applied, motor power shut-off, wheels properly blocked and shall never be left unattended.

Rule 672. Transporting of explosives shall be entrusted only to the blaster and all necessary precautions for the prevention of fire or explosion shall be observed.

Rule 673. Vehicles assigned to carry explosives shall be diesel driven and have the following fixtures and in good mechanical condition:

Flat wooden flooring;

Wood, tarpaulin or other suitable dunnage materials to cover all exposed metal especially the side of vehicles and to prevent the contact of explosives packages;

Adequate fire extinguishers

“EXPLOSIVE” signs shall be clearly marked on all sides of the conveyance.

Surface transport shall be provided by red flags while underground transport shall have red light (front and back).

Rule 674. Explosives shall be transported in a specifically designed vehicle, as in Rule 606, and shall be escorted only by the blaster and his blasting crew and the PNP representative. No other employee is allowed to ride on a vehicle transporting explosive.

Rule 675. No explosives shall be carried on electric locomotives or in a car next to an electric locomotive. Car loaded with explosives shall be pulled by means of a wooden or non-conducting drawbar.

Rule 676. Metals, metallic tools or inflammable substances or materials shall not be carried in the same vehicle transporting explosives.

Rule 677. Detonators shall not be carried in the same vehicle transporting explosives.

Rule 678. Capped fuses shall be taken underground only in covered containers.

Rule 679. Explosives which are transported by using Load-Haul-Dump/Low Profile Trucks shall be placed in a prescribed wooden box.

HANDLING

Rule 680. Explosives shall not be allowed to become unnecessarily wet and be exposed to weather or rough treatment.

Rule 681. No metal hooks or any metal tool shall be used in handling explosives except those prescribed by the explosive's manufacturer and approved by the Bureau.

Rule 682. Detonators and other explosives shall not be carried inside pockets or clothings nor shall be left carelessly lying around.

Rule 683. Packages or boxes of explosives shall not be opened, repacked or reboxed with any metal tool and in close proximity to other explosives.

Rule 684. Proper tools and equipment shall be made available to the employees using and handling explosives.

Rule 685. Detonators and other explosives shall be brought to working places in appropriate containers and in accordance with safety practices and shall remain in respective containers until ready for use.

Rule 686. Only non-sparking tools shall be used in opening boxes of explosives. Explosive boxes or containers shall be entirely emptied before these are discarded. Boxes or packing materials showing stain shall be destroyed by burning in the designated disposal site.

Rule 687. Prime cartridges shall be exploded or utilized within twenty-four (24) hours after these are prepared.

Rule 688. Blasting cap shall not be removed from original containers except when capping fuses.

Rule 689. Fuses shall be capped in suitable places outside of the explosives magazine.

Rule 690. It shall be the responsibility of the supervisor to clear the blasting area of all unnecessary personnel and equipment that may be affected before any blast is undertaken. Guards shall be posted at all possible approaches to the blasting area.

Rule 691. Blasting area shall be clearly marked with appropriate signs which shall be put up when moving into an area to begin loading and left posted until the blast is ready to be fired.

Rule 692. Unauthorized persons shall not be allowed in the immediate vicinity of the area during loading and blasting operation.

Rule 693. The supervisor on duty shall give his signal to the blaster from a vantage position where he can see the entire blast area. The siren operator shall be at the siren when the guards are posted so that there shall be no unnecessary delay when the charged holes are ready for firing.

Rule 694. Unused explosive shall be returned to the proper storage magazine.

Rule 695. Spilled explosive containers and blasting agents shall be cleaned up properly and disposed of thoroughly.

Rule 696. Misfires found in blasted areas shall not be touched or disturbed except by competent persons.

Rule 697. Two-way radios shall be turned off within 100 meters from electrical blasting cables or when entering an explosive magazine area.

Rule 698. In case where debris from blasting is generated in surface mining, the manager shall cause to institute the following necessary precautionary measures to prevent injury to persons or damage to property within or outside of the tenement.

Blasting mats are used and secured in a manner which will contain the debris during blasting operation;

If the nature of blasting in which case the mats may not be effective, proper blast design shall be effected to minimize the risk of fly rock.

Rule 699. Whenever blasting is to be undertaken in hot material the manager shall adopt charging and firing precautions and shall take the necessary precautions in accordance with the relevant procedure.

Rule 700. Explosives shall not be taken to the face or immediate vicinity of the blasting site until all drilling work has been completed.

Rule 701. Holes to be blasted shall be charged as near to blasting time as practicable as possible and shall be blasted as soon as possible after charging has been completed.

Rule 702. Blasting shall be done only at specified times preferably at the end of a shift or at lunch break. Blasting at other times shall only be done by special arrangement with shift boss or an authority of the manager or the Officer-In-Charge/duty. All charged holes shall be detonated immediately.

Rule 703. Before loading, all drill holes shall be thoroughly cleaned with compressed air through a blowpipe.

Rule 704. Every newly opened box or can of fuse shall be tested for burning rate.

Rule 705. Only standard fuse shall be used in the mines with burning rate not less than one hundred (100) seconds nor more than one hundred eighty (180) seconds per meter.

Rule 706. Only an approved broad-jawed crimper in satisfactory working condition shall be used for crimping caps.

Rule 707. It shall be prohibited to use a fuse that has been tampered or damaged.

Rule 708. Priming an explosive cartridge shall be made only in the blasting area.

Rule 709. Only non-sparking material puncher shall be used in priming.

Rule 710. When priming, the cap shall be securely buried in and surrounded by the powder of the explosive cartridge.

Rule 711. Only explosive cartridges and not the primer cartridges shall be slit for loading.

Rule 712. Only non-spark producing materials shall be used for tamping cartridges in a hole.

Rule 713. Only direct and moderate pressure without pounding or punching shall be applied when placing the primer cartridge.

Rule 714. Fuse lengths used in blasting shall be long enough to allow ample time before lighting or spitting all holes and retreating to a safe place.

Rule 715. The minimum length of the fuse for a single charge or loaded shot shall be one (1) meter provided that it is the only charge to be fired at one time in the same working place.

Rule 716. In addition to the desired length of fuse required to give the proper sequence to the holes, all fuses shall be extended at least one half (1/2) meter in length. Hence, the extending length of fuse from the collar of the hole is equal to the desired sequence length plus 1/2 meter.

Rule 717. As far as is practicable, when not using igniter cords and beanhole connectors, fuse ends shall be grouped for bunch lighting.

Rule 718. A maximum of twenty-five (25) holes can be individually lighted by two (2) men but for larger rounds, igniter cord and beanhole connectors shall be used.

Rule 719. No work of any kind shall be done at the blasting area after totally charging the hole.

Rule 720. A fuse timer shall be provided for every blast which shall be lighted simultaneously or before the first fuse in the hole is spitted except when blasting rounds using igniter cords and beanhole connectors.

Rule 721. The length of the fuse timer shall be one (1) meter less than the total length of the fuse in one hole.

Rule 722. Detonators of different brands shall not be used in the same round.

Rule 723. When rock temperature exceeds 65° C, holes shall be blasted with high temperature explosives.

Rule 724. Sufficient blasting shelters shall be provided to protect all employees endangered by flyrocks from blasting.

Rule 725. At least fifteen (15) minutes before blasting, warning horns shall be sounded, adjoining workings that can be affected by the blast shall be cleared of equipment and personnel and all approaches to the blasting area shall be fully guarded.

Rule 726. Guards posted at entrances and/or approaches to the blasting area shall be informed of and count the number of blast and shall remain at their stations until the blasting operation is finished.

Rule 727. It shall be prohibited for a miner to blast holes alone. Two (2) men shall always be at the face when fuses are lighted.

Rule 728. Fuses shall be ignited only with hot wire lighters, lead spitter, igniter cord, or other such device designed for this purpose.

Rule 729. It shall be prohibited to:

use empty explosives cases for kindling.

possess any paper product used in the packing of explosives left after blasting. Accumulations of fiber board cases, paper case linens, cartons or cartridge paper shall be destroyed by burning after these have been carefully examined to make sure these are empty.

spring a borehole near another hole loaded with explosives.

load a sprung borehole with another charge of explosives until it has cooled sufficiently.

store cases of dynamite in such a way that cartridges stand on end.

use fuse and blasting caps in wet holes without having a thoroughly waterproofed joint between the fuse and the cap.

kink fuse in making up primers or in tamping a charge.

light fuse in any borehole unless the hole contains sufficient stemming to protect explosives from sparks coming from the lighted fuse.

try to light fuse with burning papers, other inflammable fuse or improvised torches.

ELECTRIC BLASTING

Rule 730. All previously cited rules on fuse blasting which apply to electric blasting shall be hereby embodied.

Rule 731. Electric blasting shall be used in those working places where fuse blasting endangers the safety of the employees.

Rule 732. Entrances to places where electric blasting is to be undertaken shall be guarded from the time the connection to the power circuit is made until the round is fired.

Rule 733. Only duly licensed blaster shall be allowed to conduct electric blasting.

Rule 734. If electric blasting is controlled from the outside of a mine, a complete check for the number of men shall be done before firing.

Rule 735. Leg wires of electric blasting caps shall be kept shunted until ready to connect the lead or bus wires.

Rule 736. Permanent lead wires and leg wires shall be insulated. There shall be no breaks or bare place in the main lines and connections shall be taped where necessary to prevent short circuits or leaks.

Rule 737. Wires shall not touch each other or any object that might carry an electric current.

Rule 738. Blasting switches, interrupter switches or their equivalent boxes shall be locked and the keys kept by the blaster.

Rule 739. When blasting, switches shall be locked in the open position except when closed to fire the blast. Lead wires shall not be connected to the blasting switch until the shot is ready to be fired.

Rule 740. Check the circuit for continuity before firing the shots using only approved Blasters Ohmmeter.

Rule 741. Upon returning to the face after blasting, the blaster shall place shunts in permanent blasting line, disconnect, and shorts the blasting cable or lead wires and roll up the blasting cable when approaching the face.

Rule 742. The blasting switch shall be at a reasonably safe distance from the blast.

Rule 743. Blasting lines shall be kept clear from all power and lighting lines and from all grounded pipes, rails, etc.

Rule 744. When electric blasting caps are used and all of the holes fail to explode, the wires shall be disconnected from the power source and other safety precautions shall be done before going back to investigate the trouble.

Rule 745. Electric blasting on or near the surface shall cease during thunderstorms and during the approach of storm. All persons shall retreat to a safe place.

Rule 746. Charging or loading of explosives shall be stopped immediately when the presence of static electricity or stray current is detected. The condition shall be remedied before charging or loading is resumed. Electric blasting caps shall not be connected to loaded blastholes during thunderstorms.

Rule 747. If branch circuits are used when blast are fixed from power circuit, safety switches located at safe distance from the blast areas shall be provided in addition to the main blasting switch.

Rule 748. Safety switches and blasting switches shall be labeled, encased in boxes, and arranged so that the covers of the boxes cannot be closed with switch in closed position.

Rule 749. Where electric blasting is to be performed, electric circuits of equipment in the immediate area to be blasted shall be de-energized, before explosives are brought into the area. The power shall not be turned on again until after the shots are fired.

Rule 750. Power sources shall be suitable for the number of electric detonators to be fired and for the type of circuit used.

Rule 751. Electric blasting cap shall remain shunted until these are being wired into the blasting circuit. Main lines, wired rounds shall be kept shunted until immediately before blasting.

Rule 752. Electric blasting cap shall only be connected to the blasting line after unnecessary personnel and equipment are removed from the area and immediately before the shot is to be fired.

Rule 753. Before the layout is connected to the blasting line, the blaster shall obtain a signal from the foreman indicating that the area is ready for blasting; that the area is already cordoned at strategic locations; and that all other personnel are properly notified.

Rule 754. During firing, the blaster shall be required to be at a safe distance from the blast with ample cover to protect him from flying rocks.

Rule 755. An all-clear signal shall be sounded off every successful blast.

BOOTLEGS AND MISFIRES

Rule 756. Before drilling in any working place, the face, walls, back and floor shall be carefully examined to locate any remaining portions of holes left after the previous firing. This examination shall first include wetting down of the working area and shall extend three (3) meters back from face to be drilled.

Rule 757. Where any remaining part of a hole is found, it shall be washed out properly to check whether the hole contains any explosives.

Rule 758. If the remaining part of any blasted hole which has been fired contains explosive, it shall be called and treated as "misfire".

Rule 759. When the remaining part of a blast hole does not contain explosive, it shall be called and treated as a "bootleg".

Rule 760. Drilling shall not be done in or within fifteen (15) centimeters of old holes or bootlegs as some explosives may still remain at the bottom or crevices of the hole.

Rule 761. In case of a misfire, or a suspected misfire, no employees shall be allowed to return into the place where the blasting is done until the expiry of thirty (30) minutes from the time of the lighting of the last fuse, or until the expiry of twice the number of minutes that there are meters in the longest fuse used, whichever is longer.

Rule 762. Every hole in which a charge has misfired shall be marked by the insertion of a wooden marker or some other conspicuous charge or parts thereof. Misfired charges shall be re-blasted. If an additional hole and charge are necessary for the blasting of the misfired charge, the blaster shall be responsible for directing the angle of the hole and the depth to which it shall be drilled, but no drilling shall be done within a distance of sixty (60) centimeters from a misfired charge.

SPECIAL RULES FOR THE TRANSPORTATION, STORAGE AND USE OF AMMONIUM NITRATE AND AN-FO

Ammonium Nitrate

Rule 763. Since ammonium nitrate is an oxidizing material, it shall not be transported along with explosives.

Rule 764. Ammonium nitrate shall not be transported together with organic or contaminating substances such as inflammable liquids, acids, corrosive liquids, compressed gases, metal powder, bleaching powder, cotton or burlap bags, caustic soda, lime chloride, coal, cork, baled cotton, hydrated lime, sawdust or the like.

Rule 765. Ammonium nitrate shall be stored in well-ventilated buildings, if possible of non-combustible materials with solid floors to facilitate sweeping.

Rule 766. Ammonium nitrate storage building shall be properly identified and "No Smoking" sign shall be conspicuously placed.

Rule 767. During transporting or at storage places, portable fire extinguishers shall be provided. Fire fighting device shall be provided for extinguishing fire involving ammonium nitrate.

Rule 768. The storage area shall be kept clean of rubbish and trash.

Rule 769. Lower tier of drums or bags shall be protected from possible dampness of floor by placing lower tier on wooden planks or matting.

Rule 770. Every employee who helps in extinguishing ammonium nitrate fires shall be protected with oxygen-breathing apparatus.

Rule 771. Water trapped under a pool of molten ammonium nitrate shall be avoided.

Rule 772. Once a fire has been extinguished, all loose or contaminated ammonium nitrate shall be disposed of by dissolving in water. Floors shall be thoroughly hosed or scrubbed.

Rule 773. In the case of bag storage, damaged bags shall be burned, a few at a time, in an isolated area.

Ammonium Nitrate and Fuel Oil

Rule 774. AN-FO and other blasting agents shall be treated as explosives at all times.

Rule 775. All rules and regulations pertaining to the safe use of dynamite and other explosive shall be applied to AN-FO.

Rule 776. AN-FO bags and drums when being handled shall not be dropped or thrown.

Rule 777. Smoking or open flames shall not be allowed when handling AN-FO.

Rule 778. Good ventilation shall be required when using AN-FO as a blasting agent underground.

Rule 779. Adequate safeguard against nitrogen dioxide gas shall be made.

Rule 780. Upon entering a newly blasted working place, the face and muck shall be wetted thoroughly. Wetting shall be done several times during the mucking cycle.

Rule 781. In case of misfires, AN-FO shall be washed with water and a new primer shall be placed to reblast the hole provided, no unnecessary force shall be applied to extract the old or first primer.

Rule 782. If a misfire contains more sensitive explosives or if the AN-FO can not be washed out, it shall be marked and reblasted immediately.

Rule 783. If the collar of the hole is not accessible for re-blasting, both sides of the hole shall be carefully dug until the collar is exposed and accessible. Such work shall be under the direction of the supervisor.

NOISE CONTROL

Rule 784. The manager shall ensure that the noise emitted at the workplace in the mine is reduced as practicable as possible.

Rule 785. In cases where the noise received by the employees in the workplace is above the prescribed standard, the company shall ensure that:

appropriate engineering noise control is introduced to reduce the noise level or peak noise level, or;

If such is not practical, limit the exposure of employees receiving the noise according to its standard.

Duration/day, hr	Sound levels, dBA, slow response
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼	115

Ceiling value: No exposure in excess of 115 dBA shall be allowed.*

Rule 786. The manager shall install appropriate mitigating measures against noise pollution in addition to personal protective equipment. Employees exposed to excessive noise level shall be required to wear suitable device to reduce the noise intensity to tolerable levels.

Rule 787. Other factors that would determine the exposure of employees to noise shall be based on Section 1074.03 of the Occupational Safety and Health Standards of the DOLE, as amended.

ILLUMINATION

Rule 788. Adequate illumination shall be provided to all workplaces.

Rule 789. Places where winding, driving, pumping or other machinery are erected, in the proximity of which persons are working or moving about, shall also be lighted while in operation such that machinery can be distinguished clearly.

Rule 790. Adequate stationary lights shall be provided during working hours at all stations, landing and loading places and other similar places such as vertical, inclined shafts and winzes and other places as for the time of actual use, provided, that the top of winzes need not be lighted when no hoisting is being carried out, and at night at all working places on the surface.

Rule 791. Areas accessible to employees shall be lighted to no less than the minimum illumination intensities while any work is in progress as provided below:

Minimum Illumination Levels

Area of Operation

Foot candles

General site areas	5
Excavation and waste areas, accessways, active storage areas, loading platforms, refuelling and field maintenance areas.	3
Indoors : warehouses, corridors, hallways and exitways	5
Tunnels, shafts and general underground workareas, (exception : minimum of 10 foot candles is required at tunnel and shaft heading during drilling, mucking and scaling.)	5
General shops (e.g. mechanical and electrical equipment rooms, active store rooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms)	10
First aid stations, infirmaries and offices	30

Note: 1 foot candle = 10.75 lux or an equivalent of 10 lux for computation purposes.

Sources: Occupational safety and Health Administration Regulations (Standard –29CFR)

Occupational Safety and Health Standards (DOLE)

HYGIENE AND SANITATION

Rule 792. Proper housekeeping shall always be maintained within the mine.

- a. All work areas, including walkways, underground passages, platforms shall be kept clean and free from obstructions at all times.
- b. All non-hazardous wastes must be disposed in separate containers provided for.

Rule 793. Underground workers shall be required to use only the sanitary toilets which have been provided for.

Rule 794. The mine camp/area shall be provided with adequate sanitation facilities such as potable drinking water, clean eating areas washrooms, showers, toilets, changing rooms and first aid station/s.

Rule 795. The manager shall ensure that waste receptacles located underground shall be cleaned regularly.

Rule 796. The manager shall ensure that any sanitation and health facilities in the underground are located, used, maintained in order to prevent pollution of any workplace.

Rule 797. No waste timber and any other combustible or perishable material shall not be stored in the underground.

Rule 798. Accumulation of stagnant water shall not be allowed at any place in underground mine where employees work or travel and shall be drained or pumped away from such place.

Rule 799. Whenever stagnant water is drained or pumped away, precautionary measures shall be undertaken to protect employees from unnecessary risks from the emission of noxious gases.

TOXIC AND HAZARDOUS SUBSTANCE

Rule 800. All applicable provisions of R.A. 6969 and its implementing rules and regulations shall be embodied in this Order.

Rule 801. The manager shall ensure that a Material Safety Data Sheet (MSDS) is provided for each toxic and hazardous substance used or produced in the workplace and shall be readily accessible and available to all employees which are potentially at risks from the hazardous substance.

Rule 802. Each toxic and hazardous substance container in the mine shall be properly labelled, covered and stored as such.

Rule 803. A risk assessment shall be conducted at the mine whenever there is a potential health hazard posed to employees from exposure to a hazardous/toxic substance and the result of assessment shall be submitted to the Bureau.

Rule 804. Wherever there is a possibility that employees may be exposed to a hazardous substance, the employer shall reduce so far as practicable as possible the exposure of the employees by the following means:

- Eliminating the use of the substance;
- Substituting a less hazardous substance;
- Limiting the exposure of the employees to the substance;
- Using appropriate engineering and ventilation controls;
- Adopting safe working practices; and
- Using appropriate personal protective equipment.

VENTILATION AND CONTROL OF DUST, FUMES, OPPRESSIVE AIR AND CORROSIVE WATER

Rule 805. The manager shall assign a ventilation engineer for the mine or may assign additional ventilation inspectors to assist the ventilation engineer to sufficiently inspect the various areas of the mine.

Rule 806. The manager of the mine shall inform in writing the Regional Director of the appointment of the ventilation engineer and/or inspectors.

Rule 807. The ventilation engineer for underground shall meet at least the following requirements:

a licensed engineer in which mine ventilation was a substantial component of the curriculum; and

a minimum of three (3) years experience in mine ventilation.

Rule 808. Duties of a Ventilation Engineer

The ventilation engineer shall be responsible for :

1. regular inspection and testing workplaces, travelways and locations where persons may travel to determine whether
 - atmospheric contaminants in the mine are maintained at levels as low as reasonably achieved; and
 - the mine ventilation system is providing adequate ventilation flows through those areas.
2. At three (3) months interval and after any substantial change to the primary ventilation circuits and volume flows, determining and recording the quantity and quality of ventilating air in the mine using correct procedures and using instruments and equipment suited to that purpose.
3. Operating, calibrating and maintaining any metering or monitoring device used to determine the level of emission of toxic or other atmospheric contaminants from any plant or equipment at the mine.
4. Ensuring that all atmospheric contaminants sampling is carried out and is recorded and reported accurately.
5. Correctly selecting and positioning auxiliary fans if required to ensure that the required volumes of air are provided in workplaces at the mine to meet the requirement.
6. Reading and recording the wet and dry bulb temperatures of all workplaces in the mine where it is suspected that temperatures or humid conditions may have potential for adverse effects on the health and safety of persons in the workplaces.
7. Having the pressure and volume readings of primary forms used in ventilating the mine taken and recorded at intervals not exceeding 3 months.
8. Having ventilation plans of the mine should be updated at all times and to ensure that the current ventilation and survey information is immediately available on special plans maintained for the use of rescue teams in the event of an underground emergency.
9. Inform the concern manager of any defect or deficiency in the ventilation at the mine; and any atmospheric contaminants level in a workplace at the mine that exceeds the exposure standard and immediately institute appropriate mitigating measures in the ventilation of the mine.
10. Providing technical advice and guidance to any ventilation technician.

Rule 809. The employer shall provide and maintain in all active underground workings an adequate supply of fresh air.

Rule 810. The quantity of fresh air, including compressed air, supplied underground in any ventilated district, area or system, at any time at which the number of employees employed is at its maximum shall not be less than two cubic meters per minute per man (2.0 cu. m./min./man) during the full period of work exclusive of the quantity requirement of equipment.

Rule 811. Where toxic gases of any nature, whose concentration will endanger the workers, are found in mine workings, the Director or his duly authorized representative shall be immediately notified by the quickest means of communications. Further, the allowable limit of gases in a mine shall be provided by the Bureau through a supplementary order.

Rule 812. Emergency fire doors, bulkhead shall be placed where needed to prevent smoke and gases from cutting off the escape of employees working in the mine.

Rule 813. Bulkhead, door frames and fire doors shall be constructed airtight.

Rule 814. The vicinity of the collars of downcast shafts and portals of intake adits and tunnels shall be kept clear of fire hazards at a distance of fifteen (15) meters. Where fire hazards exist, an airtight door that can be easily closed shall be installed.

Rule 815. The ventilation current from the downcast or intake shall be suitably distributed to provide sufficient air to all working places.

Rule 816. In all portions of a mine or working where the natural ventilating current is insufficient, suitable mechanical equipment for ventilation shall be operated or provided. Mechanically produced and positively controlled air current shall be provided for each mine with more than three hundred (300) meters in depth (measured along the line of the shaft) unless it can be proven that mechanically produced air current would not be necessary.

Rule 817. Every door directly assisting or in any way affecting the ventilation of a mine shall be so adjusted as to be self-closing and shall remain closed in the event the ventilating current is reversed in an emergency.

Rule 818. A clear and fairly accurate, ventilation map of each district, working area or system of each mine showing the direction of main air currents and position of doors, stopping, crossings and main ventilating equipment shall be kept up to date and shall be submitted to the Director or his representative upon request.

Rule 819. Active underground areas that cannot be supplied thru natural/mechanical ventilation shall be provided with compressed air. Airline shall be provided with two (2) air valves at the entrance and at the end of the pipe. The valve at the end pipe shall be open at all times.

Rule 820. The quantity and quality of air shall be determined and monitored daily or in every change of shift if necessary.

Rule 821. Sampling of the quantity of Carbon Monoxide (CO) in the air taken under normal working conditions shall be made by each mine with no less than five hundred (500) persons on the average employed underground at a time once in every three (3) months or as often as necessary on the following places, among others: All development headings, thirty (30) meters from face; all winzes and shafts, fifteen (15) meters from the face; bottom of up cast shaft and all stopes connected with only one entrance. The sampling report which may be opened by the Director or his representative shall be kept at the mine office and it shall include the sampling points, the amount of CO present, the time of sampling and the time of the last previous blast.

Rule 822. Quantity and size of suspended dust particles present shall be determined in working places as often as necessary but not less than once in six (6) months and recorded in a book in a manner similar to that prescribed in Rule 753. The Director or his duly authorized representative may open the book for inspection.

Rule 823. No employee shall be required to work or remain in a mine if the air contains dangerous concentration of dust, smoke or fumes.

Rule 824. Every winze shall be provided with a separate airpipe and/or fan independent of the air supply to any machine drills used therein.

Rule 825. No employee shall be permitted to stope above a level where there is no through connection from the stope to the level above, except in top slicing and other methods permitted by the Bureau on conditions that the ventilation is adequate, the number of persons working therein is limited and the machine drills used are provided with water feed.

Rule 826. When fans are used, the principal fan or fans shall be installed on the surface and air ducts so arranged that the mine entrance can be used for rescue operation or other purposes.

Rule 827. Surface fan casing and air ducts connecting with the mine openings and also the fan houses and other buildings shall be adequately protected from fire.

Rule 828. The main intake and main return air currents in mines shall be in separate shafts, stopes, or drifts except in a single shaft properly designed to accommodate both intake and exhaust.

Rule 829. Airways shall be kept clear to permit free passage of air.

Rule 830. Sufficient air shall be provided to dilute or remove blasting fumes with as little delay as possible.

Rule 831. Changes in ventilation that may adversely affect the safety of the employees shall be made only when the mine is idle and no employees are in the mine except those engaged in changing the ventilation.

Rule 832. Bulkhead or stoppings in areas intended to be reopened shall be provided with pipes and valves for sampling purposes.

Rule 833. Any mine or portion of a mine shall be considered dangerous when inflammable or explosive gases are detected. Special precautions shall be taken to correct and prevent such conditions.

Rule 834. Dry drilling shall be prohibited. Permission shall be secured from the manager for isolated cases or from the Bureau for large scale dry drilling.

Rule 835. Ventilation fans shall not be stopped unless permission has been obtained from proper authorities.

Rule 836. Mine officials shall be notified at once regarding unusual changes in the ventilation circuits.

Rule 837. No employee shall be permitted to close any airways unless order is given by proper authorities.

Rule 838. Fans shall be provided with adequate guards or screen.

Rule 839. Long adits shall be provided with adequate mechanical ventilation system.

Rule 840. When drilling in mines where siliceous or other harmful dust are formed, only drill machines of water injection type shall be used.

Rule 841. The working water pressure at the drill machine shall be maintained at one (1) kilogram per square centimeter or more.

Rule 842. Working places that emits dust shall be sufficiently wetted from time to time during the duration of work.

Rule 843. The manager shall ensure that any water used for the purpose of suppressing dust has not been contaminated by any noxious substance.

Rule 844. No employee shall be allowed to enter a newly blasted working place unless the smoke and fumes from the blast have been cleared of sufficiently.

Rule 845. Where a place is likely to contain dangerous accumulation of noxious gases, workers shall maintain eight (8) meters boreholes in advance and such additional precautionary measures necessary to obviate the danger of a sudden breaking-through of gases. The working place shall not exceed two and half (2.5) meters in width.

Rule 846. Employees shall be protected from the corrosive action of underground water by providing adequate protective paraphernalia.

Rule 847. No tailings which may contain residual amounts of chemicals or reagents are used in filling stopes or voids in underground workings,

Rule 848. In mines where the ambient temperature exceeds the normal body temperature and/or oppressive humidity exists, adequate means shall be provided to correct such conditions to tolerable level.

PERSONAL PROTECTIVE EQUIPMENT

Rule 849. Adequate personal protective equipment shall be provided to all employees and shall be of a type and condition that will not expose the employee to any unnecessary and unavoidable hazards.

Rule 850. Persons working in surface mining operations shall be required to wear safety non-metallic/non-conductive hard hats and safety rubber boots or safety shoes. All safety gadget i.e., head gears and footwears, and the like shall meet the requirements of the standardization test of the Bureau of Product Standards or concerned government agency.

Rule 851. Persons going underground shall be required to wear miner's lamps and safety belts, hard hats and safety rubber boots that meets the requirements of the Bureau of Product Standards or as approved by concerned government agency.

Rule 852. When working on live electrical circuit or when handling high tension wire/cables, appropriate high tension rubber gloves, rubber mats or other suitable insulated materials shall be used for protection.

Rule 853. Employees handling materials likely to puncture abrade, or irritate hands or arms shall be required to wear appropriate protective equipment except when the use of these equipment introduce equal or greater hazards.

Rule 854. Appropriate eye protection equipment shall be worn whenever employees are exposed to the hazards of eye injury.

Rule 855. Workers exposed to a risk of drowning shall be required to wear life saving apparels.

Rule 856. Where there is harmful concentrations of gases, vapors, mists or dusts, or oxygen deficiency, workers shall be required to wear appropriate respiratory protective equipment.

Rule 857. Personal protective equipment shall be maintained in good working and sanitary and hygienic condition.

Rule 858. Safety belts, harness, straps or lifelines shall be worn by all (persons) employee working at elevations three (3) meters above or where there is hazard of falling or slipping from a dangerous heights.

Rule 859. Employee who are assigned to work in a confined space shall be provided with the necessary and appropriate personal protective equipment.

HEALTH HAZARD CONTROL

Rule 860. Pursuant to the Duties and Responsibilities mentioned in Chapter I, Section 5 of this Order, the employer shall provide for emergency and occupational health services and facilities in accordance with the previous Rules of this Order.

Rule 861. In the case of a Service Contractors, they may enter into an agreement with its principal regarding the mutual use of emergency health services and facilities provided by the latter.

Rule 862. The (A) medical practitioner or safety engineer shall conduct health and sanitary inspections in all work places on a regular basis.

Rule 863. Every employer shall keep in his workplace at least the minimum quantity of medicines, medical supplies, equipment and medical facilities in accordance with the prescribed list in Chapter VII of Sanitation Code of the Philippines and medicines.

Rule 864. Every employer shall provide his workers with emergency medical and dental services and facilities in the following cases and manner.

For Class D mines and service contractors, the employer shall provide:

At least one (1) full time first aider for every shift who may be one of the workers.

At least one (1) part time* Nurse

At least one (1) part time doctor and dentist.

"Emergency treatment room"

For Class C mines and Service Contractors, the employer shall provide:

At least one (1) first aider in every shift

At least one (1) full time** nurse

At least one (1) part time doctor and dentist

"Emergency Clinic"

For Class B mines and Service Contractors, the employer shall provide:

At least one (1) first aid team in every shift

At least one (1) full time nurse

At least one (1) full time doctor and one (1) part time dentist

"Emergency clinic"

For Class A mines and Service Contractors, the employee shall provide:

At least one (1) first aid team in every shift

At least one (1) full time nurse for every 250 workers for every shift

At least one (1) full time doctor in every shift and one (1) full time dentist

"Emergency Hospital"

* a part-time health personnel shall render service for a minimum of four hours a day

** a full time health personnel shall render service for a minimum of eight (8) a day

Rule 865. An employer may not establish an emergency hospital and/or dental clinic in his workplace as required where there is a hospital or dental clinic located not more than five (5) kms. away from the workplace, or which can be reached in twenty five (25) minutes of travel. Appropriate standby emergency transport vehicle shall be provided by the employer for the immediate transfer of the sick/injured worker to the hospital.

Rule 866. The employer shall enter into a written contract with the nearest hospital and dental clinic for occupational health services to be rendered to its workers.

Rule 867. The "Occupation Health Practitioner" shall maintain a monthly health record of each workers and shall prepare an annual medical report for submission to the Bureau copy furnished DOLE-BWC and Occupational Health Division-Department of Health.

IDENTIFICATION OF PIPING SYSTEM

Rule 868. All applicable rules governing the proper identification of materials in piping systems shall conform with the Occupational Safety and Health Standards, as amended, of the Department of Labor and Employment (DOLE).

PLANT OPERATIONS

Rule 869. Other safety rules and regulations cited elsewhere in this Order, which are found applicable to plant operation, are hereby embodied.

Rule 870. Employees shall know the characteristics and the hazards involved in handling chemicals.

Rule 871. Employees who are assigned to handle hot or molten materials shall be required to wear fire proof apparel.

Rule 872. Employees assigned to work in the bin or tank shall be required to wear a safety belt with a lifeline attached to a permanent support.

Rule 873. No employee shall be allowed to look directly into the smelting furnace while in operation.

Rule 874. No digestion process shall be done outside of the digestion chamber.

Rule 875. Wearing of loose clothes shall be avoided and appropriate clothing shall be worn in specific areas.

Rule 876. Locations of all safety equipment, fire extinguishers, first aid kit and others shall be known to all at all times.

Rule 877. All mineral-processing plants shall be provided with appliances to control, suppress or dilute the emission of atmospheric contaminants.

Rule 878. Compressed air shall not be allowed in cleaning the body.

Rule 879. Proper housekeeping shall be practiced at all times in the plant.

Rule 880. No employee shall be permitted to work or undertake repairs on any plant machinery while in operation.

Rule 881. Operations, adjustments, and repairs of plant machinery and equipment shall be restricted to trained and authorized personnel. Apprentices shall be allowed to operate, adjust and repair plant machinery and equipment provided that they are closely supervised.

Rule 882. Before starting any moving equipment within the plant, the operator shall ensure that the working areas are cleared of men, materials and other obstacles.

Rule 883. Conveyor system shall be provided with adequate protection such as screen, grills, or guards when constructed along passageways and working areas to protect employees to get contact into.

Rule 884. Ball mills shall be guarded/cordoned at all sides at least 1 meter away from the shell to prevent personnel from going near the rotating shell during milling.

Rule 885. Lock and tag procedure shall be implemented when doing repair works and internal inspection at mill and other equipment. All service contractors/employees shall secure permission from the plant manager or supervisor before starting any work.

Rule 886. No employee shall at any time stand or work under suspended crane load. Overhead crane shall be provided with buzzer or any other signal system to indicate its movement.

Rule 887. Drives and belts shall be adequately guarded and the self-draining floor shall be washed frequently to prevent accumulation of oil and grease.

Rule 888. Belt and chain drive units shall:

be free from excessive accumulation of dusts and other inflammable materials;

be well lighted at loading and unloading points;

be provided with warning or signal device at both ends;

have no power conductors installed on the clearance side of the belt;

be provided with circuit breakers and switch control; and

have the frames of motor and metal cases of control well grounded.

Rule 889. Elevated conveyors requiring frequent access shall be provided with footwalks or platforms along the entire length and equipped with standard railings.

Rule 890. Walkways shall be cleared of ore spillage, machine parts and other materials.

Rule 891. Conveyors shall only be used in transporting raw or finished materials.

Rule 892. When a conveyor is in operation, all employees shall be prohibited to climb over or pass under unprotected conveyor belt, clean the deck, pulleys or rollers.

Rule 893. Emergency trip cords or push button switches shall be installed on all conveyor systems and shall always be in good working order. Any defects shall be repaired immediately.

Rule 894. No repair or servicing shall be done on conveyors and its accessories while in operation.

Rule 895. All plant personnel shall exercise extra precaution whenever passing beneath moving belts.

Rule 896. It shall be prohibited for any employee to enter through openings located below the bin containing hang-up materials. Adequate measures shall be provided for barring down hang-up materials.

Rule 897. It shall be prohibited for any employee to bathe or swim in the mill water reservoir, head tanks, water reclamation thickeners or tailings pond.

Rule 898. Platforms and railings shall be kept in safe conditions.

Rule 899. It shall be prohibited to direct stream water to electric power lines, electric motor, switch gear, welding machine or piece of an electrical equipment.

Rule 900. It shall be prohibited to store personal belongings on switch cabinets.

Rule 901. Reagents for leaching plants shall be handled with reasonable precautions. Container labels and instructions shall be read and followed carefully. Stocks shall be stored separately in a dry place and under cover from heat and sunlight.

Rule 902. Slurries or solutions in leaching circuits shall be always treated as hazardous to health due to the presence of cyanide or other leachants or to hot and corrosive solutions at high temperature and pressure.

Rule 903. Whenever a ball/rod mill is stopped for inspection, any leachant feed shall be turned off and sufficient volume and pressure of compressed air shall be blown in for a sufficient period of time to cleanse/purge the toxic air inside the mill before entering.

Rule 904. Cyanide and other leachant spillage shall be removed or cleaned immediately.

Rule 905. Leachant shall be stored in a well kept and ventilated enclosures. Storage floors shall have drainage connected to the leaching circuit and kept in a manner that permits vacuuming and sweeping in case of major spills.

Rule 906. Food, drinks and tobacco shall be prohibited in the leachants storage and mixing areas. Warning signs of these restrictions shall be posted along these areas.

Rule 907. Extra precaution shall always be maintained in mixing leachants with water. Mixing tank shall be constructed to direct dusts and gas away from the operator. The feed water entry shall be provided with a positive means of preventing any back flow.

Rule 908. All working areas used for the collection of leachant solutions shall be provided with sufficient mechanical ventilation.

Rule 909. Areas where leachants and other chemicals/substances are mixed and handled shall be provided with a safety shower, eyewash and hand wash facilities and fresh water wash-down hose.

Rule 910. Employees handling leachant solutions, or open containers during normal mixing, maintenance and in-situ leaching procedures shall wear the necessary personal protective equipment.

Rule 911. Leachant containers shall be washed clean or otherwise decontaminated before they are removed from the mixing area. Washed water shall be isolated or conducted to the mill or tailings circuit.

Rule 912. Inspection, cleaning and repairing of tanks and other equipment used for solutions of leachants shall be performed under careful supervision of properly trained workers and provided further that no personnel nor any items has been left inside the tank after undertaking maintenance job.

Rule 913. Monitoring wells or trenches shall be placed below an earth tanks, tailings pond, or leach pond containing cyanide and other deleterious chemicals in order to detect any possible solution loss that may contaminate groundwater. Water in the wells or trenches shall be sampled daily, analyzed and the results recorded.

Rule 914. Cyanide shall be stored to prevent it to be exposed to acid vapors, acid salts or acids liberated by spillage or leakage.

Rule 915. Aqueous cyanide and other deleterious solution shall not be mixed by air agitation method.

Rule 916. At all points in cyanide leaching operations, the pH level shall be monitored and maintained not lower than 9.5.

Rule 917. Fire extinguishers containing carbon dioxide as fire extinguishing agents shall not be used on, in or near an area of cyanide storage.

Rule 918. In heap leaching operation, this shall be governed by :

the competence and stability of the heap materials such that the danger of sudden slide is avoided.

leach pads are appropriately lined to avoid seepage of solution that may contaminate the ground water.

unauthorized persons are prohibited from entering the heap leaching area.

solution ponds are appropriately lined and enclosed with at least 2.4 meters perimeter fence.

a hazard study shall be required to determine the best options for safe operation and its health impacts to the employees.

Rule 919. In areas where cyanides and other toxic chemicals are used, appropriate warning signs shall be provided and posted.

Rule 920. Monitoring devices so far as practicable as possible shall be provided to detect leakage in solution ponds.

Rule 921. Mill personnel shall be required to know the antidotes of cyanide and dangerous chemicals and antidote kits shall be provided in the area where they are handled. The instructions shall be posted.

Rule 922. Other safety rules and regulations cited elsewhere in this Order, which are found applicable to cement plant operation, are hereby embodied.

Rule 923. No employee shall be required to enter any hot and confined working area for any purpose unless the temperature inside has reasonably cooled and declared safe by the safety engineer for the said employee to enter and work.

Rule 924. Refractory bricks shall not be tossed by one worker to another during rebricking works.

Rule 925. Jack supports for uncompleted brickwork rings shall be properly secured before repositioning the kiln.

Rule 926. Adequate working spaces shall be provided for declogging works in the preheater cyclones, calciner, conditioning tones and the like to give sufficient area for mobility.

Rule 927. An appropriate device/material shall used in the inspection hole of the kiln for viewing purposes inside the kiln.

Rule 928. All cooler covers shall be securely fastened to prevent hot gas and dust from escaping the chamber.

Rule 929. Adequate ventilation shall be required in all confined working areas such as inside the kiln, ball mills, cooler, preheater, calciner and the like.

Rule 930. Filter bags used in the coal mill jet pulse dust collectors shall be of the carbon-impregnated type to prevent explosion due to static electricity.

Rule 931. Accumulated coal dust spillage shall be removed and properly disposed of immediately.

Rule 932. Minimum concentration of carbon monoxide (CO) shall be maintained in the kiln flue gas as per recommendation by the electrostatic precipitator (EP) manufacturer to prevent explosion.

Rule 933. No person, equipment and tools shall be allowed inside the kiln before rotating the kiln during repairs and maintenance.

Rule 934. Extra precautions shall be exercised in handling concentrated lime, pulp and reagent solution.

Rule 935. Any personnel handling and mixing mill reagents such as frothers, collectors, cyanide and other toxic chemicals shall be required to wear chemical respirators, gloves and other protective equipment.

Rule 936. Only trained and authorized personnel shall be allowed to handle chemicals.

Rule 937. Bottles containing acid or dangerous chemicals shall be clearly labeled and stored properly to prevent breakage or spillage.

Rule 938. When diluting an acid with water, the acid shall always be poured slowly into the water with constant stirring of the mixture. Water shall never be poured into the acid.

Rule 939. Before breaking any line or container that has held a liquid or gas under pressure, it shall be isolated on either side of the break and that the area shall be cleared of other persons.

Rule 940. Containers, pipes or hoses which had been used in handling and conveying toxic materials shall either be properly disposed/destroyed or clearly marked.

Rule 941. In area where corrosive liquid, gases, fumes, mists or vapours occur, adequate measures shall be taken to prevent damage to structural parts and equipment or apparatus.

Rule 942. Handling, using and transporting of corrosive or hot liquids in bulk shall be done by means of gravity, compressed air or inert gas displacement or pressure pumps with the respective system extending to the point of use.

Rule 943. In emptying receptacles containing corrosive or hot liquids which are not equipped with drain cocks, the employees shall be required to use pumps, tipping appliances or the like.

Rule 944. Where portable receptacles are used in transporting corrosive liquids inside buildings, care shall be taken to prevent the escape of fumes or mist and shall be done preferably by means of conveyors or by special conveyances.

Rule 945. Receptacles shall be kept securely closed except during extraction of the contents.

Rule 946. Floor of rooms where corrosive liquids are handled or used shall be maintained as dry as possible.

Rule 947. Spillage of corrosive liquids shall be cordoned until removed.

Rule 948. Spillage or escaping corrosive acid and alkalis shall never be allowed to be absorbed by sawdust, waste or other organic materials but instead shall be flushed out with water or neutralized with appropriate solution.

Rule 949. Where corrosive liquids are handled or used, clear running water shall be readily accessible to all employees.

Rule 950. Red label chemicals, like chlorates, nitrate and peroxides which are apt to cause violent explosions and produce fire shall be handled with caution and such chemicals shall be covered with a Permit for Possession and Purchase issued by the Philippine National Police upon proper indorsement of the Regional Offices.

Rule 951. Storing of liquid ammonia shall not exceed three quarter full.

Rule 952. Flammable liquids and gases shall be stored in a cool and well-ventilated area.

Rule 953. Containers of flammable materials shall be opened and thoroughly drained and washed before cutting or welding.

Rule 954. Smoking or open flames shall be prohibited near storage tanks holding reagents.

Rule 956. Fume hoods shall be installed over hot plates and analyzers where toxic gases may emit.

Rule 957. All vessels used for chemical treatment of minerals or mineral substances at the mine shall be fitted with hoods or other appliances to prevent harmful fumes, mists or vapours from entering the air breathed by employees.

Rule 958. Fire assay room shall be properly ventilated.

Rule 959. Mixing chemicals shall only be done by trained and authorized personnel.

Rule 960. Fuel systems of furnaces and burners shall be properly located and proper shut-off valves shall be installed.

Rule 961. Assay furnace shall be provided with appropriate chimney connector pipes for its entire length.

Rule 962. Water installation or the like shall be prohibited within the immediate vicinity where molten metals are handled.

Rule 963. Floor area shall always be kept clean and clear of obstruction if working near or carrying molten metal.

Rule 964. Quenching hot material shall be done carefully.

Rule 965. Molds for molten metals shall be kept dry before using.

Rule 966. Reagents and chemicals shall be properly segregated and labeled and stored separately.

Rule 967. Chemical containers shall not be exposed or left opened. Emptied containers shall be decontaminated, neutralized or diluted before disposal.

Rule 968. Eating and smoking shall be prohibited after handling said materials unless materials unless employees have properly washed hands and face.

Rule 969. Acids and chemical containers shall always be inspected for any leakage before transport.

Rule 970. During transport, acids shall be separated from cyanides.

RADIATION SAFETY

Rule 971. All applicable rules and regulations of PNRI standards shall be included in this Order.

Rule 972. Radioactive materials used in plant operations shall be maintained and properly shielded for protection of employees against ionizing radiation.

Rule 973. Any personnel suspected of being contaminated in view of accidental exposure to radiation shall undergo decontamination procedures.

Rule 974. Any material used in the decontamination procedures and materials which are not fully decontaminated shall be kept in prescribed storage room.

Rule 975. After working on radioactive material, the Radiological Safety and Health Officer shall ensure that all employees being exposed into and materials used have properly undergone monitoring and decontamination.

Rule 976. The Radiological Safety and Health Officer shall prepare a radiation management plan which shall form part of its safety and health program. It shall contain the following measures, which shall be undertaken to control the exposure of employees;

the equipment, facilities and operational procedures used at the mine;

monitoring programs;

procedures for the assessment of dose;

procedures for reporting incidents.

Rule 977. No employee shall be allowed to enter or work in an area suspected of contamination until declared safe and clear.

Rule 978. If any defect or malfunction of the nuclear device occurred in the mine that cause doses of radiation in excess of dose constraint or contamination levels in excess of authorized limits, the Radiological Safety and Health Officer shall cause the investigation and take remedial action to correct the defect of malfunction. In which case, notification shall be served to the Bureau and the PNRI.

ELECTRICAL AND MECHANICAL RULES

Rule 979. For all electrical installations operations and maintenance, the provisions of the latest edition of the Philippine Electrical Code, Parts I and II as approved by the Institute of Integrated Electrical Engineers shall be followed unless otherwise specified.

Rule 980. For all mechanical installations the latest provisions of the Philippine Mechanical Engineering Code shall be followed unless otherwise specified.

Rule 981. Operations and maintenance of mechanical and electrical machinery and equipment shall, in all cases, be done by duly authorized persons.

Rule 982. Necessary inspection, test and maintenance records of mechanical and electrical machines shall be compiled and kept in a form prescribed by the Bureau.

Rule 983. Safety device, tools and other apparatus used on any electrical or mechanical equipment or machinery shall be of the approved standard.

Rule 984. Machinery, equipment and tools shall be maintained in such condition that employees shall not be endangered.

Rule 985. Safety valves, governors, overspeed trips, automatic cut-outs, fuses and other similar safety protective device shall be installed to protect equipment from damage. Such device shall not be tampered with or altered and shall not be repaired or adjusted at any time without authorization.

Rule 986. Machinery and equipment shall be equipped with appropriate guards to provide adequate protection for employees against contact with moving parts, or which prevent access by employees to the dangerous areas during operation.

Rule 987. Loose clothing, long sleeves shall not be worn near or around revolving/rotating machinery, equipment and parts.

Rule 988. A plan shall be kept at the mine showing the location of all permanently installed electrical machinery and apparatus in connection with the mine electrical system including cables, conductors, lights, motors, switches, trolley lines and transformers. This plan shall be updated as often as necessary.

Rule 989. Where electricity is used in underground mine, a systematic inspection and reporting of all wiring and equipment shall be made at least once a month.

Rule 990. The rating of each piece of electrical equipment shall be stamped on it or inscribed on a metal plate suitably mounted and maintained upon the equipment. The inscription on the plate shall indicate voltage, capacity, full load current, speed and duty.

Rule 991. No person shall be allowed to work on or with electrical equipment of any kind unless he has been previously instructed by an authorized person in connection with the performance of his duties.

Rule 992. Care shall be taken to ensure good mechanical construction and neat workmanship in connection with all wiring installation of equipment.

Rule 993. Warning signs shall be posted at points where there are possibilities of contact with live or moving parts. Only authorized employees shall be allowed to operate the electrical apparatus.

ELECTRICAL SAFETY RULES

Rule 994. Ground circuit shall be regularly checked at reasonable intervals. Records of the same shall be kept as part of the mine records.

Rule 995. Power lines that are no longer in use shall be removed or disconnected and properly secured from accidental connection.

Rule 996. All electrical apparatus shall have adequate safeguard against fire and electrical shocks in case of failure of insulations.

Rule 997. The operation and setting of instantaneous relays shall be checked regularly and the records therefrom shall be maintained as part of mine records.

Rule 998. Parts of electrical equipment which produce arcs, sparks, flames or molten metals in normal operation shall be enclosed unless separated and isolated from combustible materials.

Rule 999. In hazardous jobs such as working with or close to live conductors, at least two men shall work together. When it is necessary for an employee to leave his companion, the person left behind shall work only outside the hazardous area.

Rule 1000. Electrical construction and/or installations shall be made in accordance with the approved plan and shall be under the direct supervision of a Professional Electrical Engineer or Registered Electrical Engineer.

Rule 1001. Temporary installations of electrical equipment, device, controllers, instruments and wiring shall be done under the direct supervision of an authorized person and the materials used shall conform with the approved specifications.

Rule 1002. Installations of generators, motors, control equipment conductors, exposed live wires and moving parts shall be properly insulated and guarded.

Rule 1003. Temporary covers, guards, warning signs and other safety devices shall be provided before leaving unfinished jobs.

Rule 1004. Transformer station shall be kept locked against unauthorized entry and warning signs shall be posted. Locks shall be accessible and can be opened from the inside.

Rule 1005. Surface transformers shall be installed at least two (2) meters above the ground or enclosed in a vault, or by substantial fence at least 1.5 meters in height.

Rule 1006. Underground substations shall be placed in a vault or fire proof rooms properly ventilated and arranged to permit easy escape of employees in case of fire or explosion.

Rule 1007. Substations within thirty-five (35) meters from any mine opening shall be in vault or fire resistant rooms.

Rule 1008. Surface substations containing oil-filled apparatus shall be isolated or separated from other equipment and buildings by fire resistant barriers.

Rule 1009. The area immediately surrounding a substation shall be kept free from grass, weeds and other combustible materials.

Rule 1010. Adequate and appropriate fire protection equipment shall be provided in every substation.

SWITCHBOARDS AND CONTROL CENTERS

Rule 1011. Adequate illumination shall be provided both at the front and rear side of switchboards.

Rule 1012. Entrances to the backspace of any switchboards with exposed live parts shall be provided with barriers that are kept locked.

Rule 1013. Insulating mats or platform shall be provided in front of switchboards.

Rule 1014. Only duly authorized persons shall be allowed to work on switchboards and control rooms and warning signs shall be posted.

MOTORS, GENERATORS AND CONTROLLING DEVICES

Rule 1015. Switch control shall be installed within sight of the motor operator and the equipment he operates.

Rule 1016. The control device of motors shall be placed at a safe distance from combustible materials.

Rule 1017. Motors shall be of the type approved in accordance with the conditions where these are installed.

Rule 1018. Overload device, starting controls and compensators shall not be used as circuit breakers.

Rule 1019. Controls shall be identified or labeled and shall be equipped with indicating lights or meters to show when the motor loads are energized.

WORKING ON ENERGIZED EQUIPMENT

Rule 1020. Rubber gloves, shield and other necessary safety equipment shall be used by employees working on energized electrical conductors or equipment operating at more than one hundred fifty (150) volts to ground.

Rule 1021. No work shall be done on energized electrical equipment or conductor operating at seven hundred fifty (750) volts, unless two or more experienced employees are present.

Rule 1022. In tunnels and manholes, no work shall be done on any energized electrical conductor operating at one hundred fifty (150) volts to ground unless two or more experienced employees are present.

Rule 1023. Metal ladders shall not be used while working in proximity to energized electrical equipment.

TESTING AND ENERGIZING ELECTRICAL EQUIPMENT

Rule 1024. Before starting to test-run electrical equipment, branch circuit protective device and circuit grounding system shall be checked if properly installed and any waste materials and tools removed.

Rule 1025. Before energizing the power line of equipment, the protective device and the controller shall first be energized and checked for proper setting and operation.

Rule 1026. Testing and energizing shall be carried out with proper instruments and tools such as megger, ammeter, volt meter, insulating stick, insulation gloves and the like for protection against electrical hazard, accidental damage or injury.

Rule 1027. The circuit shall be checked completely before power is applied for the first time by an authorized supervisor.

Rule 1028. Motors and testing instruments shall be checked of its capacity before using.

Rule 1029. High voltage circuit on the primary side shall be tested on the low voltage side of an instrument transformer.

Rule 1030. Approved tester shall be used in testing ground or faulted windings and commutator segment assembly.

Rule 1031. Circuits shall be tested with approved testing equipment before energizing.

Rule 1032. Before breaking the circuit of current transformer secondaries, the loads shall be grounded and effectively short-circuited between the transformer coil and the points at which the circuit is to be broken.

Rule 1033. Before power is applied for the first time to potential transformer, portable meters and the like whether connected temporarily or permanently, all necessary checks shall be undertaken.

REPAIRS AND MAINTENANCE

Rule 1034. Power shall be shut off when making examinations, repairs or alterations of electrical installations. When this is impractical, the approval of the supervisor shall be obtained and all necessary precautions shall be taken.

Rule 1035. Employee shall be required to “lock-out or block open” the control device, disconnect open type switches, and remove fuses before examining, repairing or working on circuits, electrical equipment and other electrical installations. Lock shall remain in an open position and shall be removed only after a thorough investigation by the supervisor-in-charge.

Rule 1036. If motors are running, safety switch shall not be opened. The magnetic controller shall be de-energized first before opening.

Rule 1037. Repairs and maintenance shall be made according to standard procedures and manufacturers specifications.

Rule 1038. Removal and replacement of fuses shall be done with a fuse holder or with approved rubber gloves. Fuses and disconnectors shall not be pulled unless loads on the circuit are de-energized. Only fuse in a cartridge shall be used.

Rule 1039. During storm, it shall be prohibited to work or stay under any high voltage distribution lines or transmission lines.

Rule 1040. Employees shall be prohibited to wear rings, jewelries, watches or metal chains and such other articles which may be caught in by moving parts of machineries of which may come in contact with electrical circuits.

Rule 1041. Covers of protective device of electrical circuit breakers and starters shall always be closed before switching in “on” position.

WORKING ON ELECTRIC POSTS OR POLES

Rule 1042. Posts shall be free of any defects. Defective posts shall be supported until replacement is made.

Rule 1043. Before starting to work on live circuits in electric posts, rubber blankets or shields shall be placed over adjacent ground wires for protection while working on defective wires.

TROLLEY AND BARE FED WIRES

Rule 1044. Trolley and bare feed wires shall be suspended at least two (2) meters above the rail and shall be kept reasonably tight at all times. These shall be equipped with lightning arresters of the approved type at the point of entrance to the mine and shall be properly guarded at main trip stations.

Rule 1045. Each power circuit shall be provided with circuit breakers or switches at the mine entrance, at each point of a major division in the circuit and at practical intervals in main haulageways.

Rule 1046. Underground feeder wires shall be properly guarded or adequately insulated and shall be free from contacts with coal, timber, roof or inflammable materials.

TRACKS

Rule 1047. Cross hands shall be used at intervals not exceeding sixty (60) meters of rail.

Rule 1048. Special provisions shall be made for bonding around switches, frogs or openings in the track in order to ensure a continuous electric circuit.

Rule 1049. On secondary tracks, at least one rail shall be bonded or welded and cross bond installed at least every sixty (60) meters.

UNDERGROUND INSTALLATIONS OF HIGH VOLTAGE CABLES TRANSMITTING 2300 VOLTS OR MORE

Rule 1050. High voltage cables shall not be installed in any mine without the approval of the concerned MGB Regional Office.

Rule 1051. High voltage cables shall be provided with circuit breakers or other load limiting device as they enter a mine.

Rule 1052. Voltage exceeding 600 volts shall not be used underground, except under the following conditions:

- a. Circuits shall be carried inside metallic sheaths or;
- b. The sheath or covering shall be permanently grounded; and
- c. These voltages shall be applied only to transformers or to motors in which the high-voltage winding are a part of the stationary element.

Rule 1053. Transformer placed underground shall be air-cooled with non-flammable liquid.

Rule 1054. Transformers filled with inflammable oil placed underground shall be housed in a fire-resistant rooms equipped with some means of confining the oil in the event of leakage.

BATTERY ROOMS AND STORAGE BATTERY HANDLING

Rule 1055. Smoking, welding and the use of open flames and sparks shall be prohibited in battery charging rooms. Warning signs shall be posted.

Rule 1056. Battery rooms or charging areas shall be provided with adequate ventilation.

Rule 1057. The control switch shall be opened first before connecting or disconnecting battery charging cords or loads.

Rule 1058. Rubber gloves, eye and face protection shall be worn when handling electrolyte solution.

MECHANICAL SAFETY RULES

General Safety Precautions

Rule 1059. Machine having a grinding, shearing, punching, cutting, rolling, mixing or similar action in which a person might accidentally come in contact with shall be properly guarded.

Rule 1060. Machines shall not be operated unless these are in good order and all safeguards and safety devices are in place and in good working condition.

Rule 1061. Safety and indicating device shall be properly maintained and checked periodically from damage and deterioration.

WORKSHOP EQUIPMENT

Rule 1062. On milling machines:

the table shall be moved with the work as far away from the cutter as possible while setting up;

heavy cut or feed shall be avoided when using cutter in a vertical milling machine;

the speed shall be checked and feeding shall be done against the direction in which the cutter is rotating;

hands shall be kept away from the cutter when machining;

the operator shall never reach over a revolving cutter, especially at the side of the cutter which cuts into the work; and

brush shall not be used in removing chips.

Rule 1063. The drill press operator shall be required to comply with the following:

inspect all drilling machines and similar equipment and see to it that these are properly installed;

remove chuck wrenches from the drill chucks before starting the machine;
clamp the work on the table;

run the drill only at proper speed;

change belt for speed regulation only when power is "OFF" and machine has come to a dead stop;

scrap all chips from drilled holes; and

refrain from wearing gloves while operating a drill.

Rule 1064. The planer operator shall be required to comply with the following:

check that the planer clears the cross-rails after the work is fastened and that stop pegs are in proper places and safety dogs are secured in position;

have the plane(s) idle when adjusting the length of the bed stroke and speed of the machine to suit work;

clear the passageways of any kind of tools;

hold the tool with one hand or place a wooden support under it when loosening the toolholder.

Rule 1065. On lathes, the operator shall be required to comply with the following:

check that the tailstock, toolholder and the job is properly clamped before turning on the power;

use the hands only and never to use the power that operates the lathe when assembling or removing the chuck or face plate. a board shall be placed on ways;

remove chuck wrench or any other tool in the chuck;

switch off the power before measuring any revolving work or parts;

minimize heavy cuts on slender work;

stand to one side so that if the file is forced upward, it will go past the body rather than against it. It is advisable to file left-handed;

Rule 1066. The power saw operator shall be required to comply with the following:

stand on one side of the saw frame when adjusting the speed;

mount the work piece only when the saw is at stop;

keep fingers from projecting beyond the end when using the sliding stock guide;
ensure that the blades for both circular and band saws are in good condition before using;

shut off the power and shall never attempt to disengage the blade from its position until the machine has come to a dead stop if the blade breaks during operation.

Rule 1067. The pedestal grinder operator shall be required to comply with the following:

stand to one side of the wheel when starting it up, especially if the wheel is new;

check that the face of the wheel is flat and free from any grooves;

feed the work slowly and gradually;

make sure that the tool rest is only 3 mm from the face of the wheel. This distance shall be checked carefully;

use the face of the wheel only, unless it is designated for grinding on the side. The entire face of the wheel shall be used whenever possible;

never use loose grinding wheel;

stop the wheel if it vibrates excessively. Keep the wheel properly balanced and securely attached to the spindle;

hold the work against the wheel firmly;

use clamps or other suitable holding device for grinding short pieces;

always use face shield or goggles if a grinder is not provided with protective glass shield; and

never use portable grinders as substitutes unless properly adapted for this purposes.

replace the grinding wheel when the maximum wear limit is reached.

PUMPS, AIR COMPRESSORS AND OTHER STATIONARY EQUIPMENT

Rule 1068. On pumps :

Exposed rotating couplings of pumps shall be adequately guarded and when guards are removed for oiling or repairing these shall be placed before the pumps are put in operation.

Rule 1069. On compressors:

where a gasoline or diesel engine is used to drive a compressor, pipe of suitable length shall be provided to divert exhaust gases away from the compressor unit.

if repairs or adjustment are to be made on a compressor, header valves shall be closed and that no air pressure remains in the cylinder and all relief valves shall be opened. Controller shall be tagged and locked out.

Rule 1070. On other stationary equipment:

Repairs or adjustments shall not be made on any machinery until the power has been shut off and the machinery blocked securely against all motion.

BOILERS AND PRESSURE VESSELS

Rule 1071. The following codes shall govern the inspection, checking, testing and other consideration prior to the approval of installation of any boiler or pressure vessel:

ASME code for boiler and pressure vessels.

ASME Code for pressure piping.

API-ASME Codes for unfired pressure vessels for petroleum, liquid and gases.

Philippine Mechanical Engineering Code.

INTERNAL COMBUSTION ENGINE

Rule 1072. The ASME and Philippine Mechanical Engineering Codes shall govern the inspection and installation of internal combustion engines.

STANDARD RAILING GUARDS, TOEBOARDS

Rule 1073. On construction:

Railing guards:

railing guards shall be constructed in a permanent and substantial manner of wood, pipe metal structure or other material of sufficient strength;

the dimensions of railings, posts, anchoring and framing of members shall be such that the completed structure is capable of withstanding a load of at least one hundred (100) kilograms applied in any direction at any point of the top rail;

sharp corners of railing guards shall be rounded and smoothed;

standard railing guards shall be at least one (1) meter in height; and

standard railing guards shall have posts not more than two (2) meters apart and an intermediate rail halfway between top rail and the floor.

Toeboards:

Toeboards shall be at least fifteen (15) centimeters in height, made of wood, steel or other suitable materials and securely fastened in place

Rule 1074. On locations and equipment :

Standard railings and toeboards provided for in the preceding rule thereof shall be placed in proper locations or in such other locations as may be prescribed by the enforcing authorities.

Floor and wall openings

Ladderway and stairway floor openings shall be guarded on all exposed sides, except at the entrance to the opening, by permanent railings and toeboards.

Hatchway, chute, pit and trap floor openings shall be guarded by removable rails with toeboards on all exposed sides; or by flush hinged cover of adequate strength.

Manhole of floor openings shall be guarded by covers of adequate strength which need not be hinged.

Floor openings into which persons may accidentally walk on account of fixed machinery, equipment, or walls shall be guarded by covers securely held in place and leaving no opening more than two and a half (2.5) cm. in width.

Wall openings less than one (1) meter from the floor having a height of at least seventy-five (75) cm. and forty-five (45) cm. Wide from which there is drop of more than two (2) meters shall be solidly enclosed or guarded by fixed or removable rails.

Overhead walks, runways and platforms:

walkways, runways, working platforms and open side floor two (2) meters or more above floor or ground level, except small platform used for motors and similar equipment which do not afford standing space for persons, shall be guarded on all open sides by standard railings and toeboards; and

where railings may induce workers to take "shortcuts" from long detour, additional railing components shall be provided where stairway is not possible.

Prime Movers

Cranks, crossheads, connecting rods and tail rods shall be guarded with standard railings.

Passageways over journal or bearing of any prime movers shall be guarded with standard railings and toeboards.

Mechanical Transmission equipment

Power transmission elements which are exposed to possible personal contact shall be adequately guarded with standard railings or cover plates if these are located less than two hundred forty (240) cms. Above floor level.

vertical or inclined drives, rope or link drives shall be enclosed up to upper pulley or to a height not less than two hundred forty (240) cms. above the floor or platforms or shall be guarded with standard railings.

Agitators, Mixing Machines and Drum Mixers

When the top of an open agitator tank, heater tank or paddle tank is less than one (1) meter above the floor or working level, adequate standard railings shall be installed on all open sides.

Service walkways for access drives or valves, or for taking samples shall be provided on both sides with standard railings and toeboards.

Crushers, Grinding Mills and Pulverizers

Where enclosures are not practicable on moving parts of crushers, grinding mills and pulverizers which constitute a hazard, such parts shall be surrounded by standard railings.

Ball, Rod, Tube, Compartment and other Tumbling Mills

Standards machinery guards or standard railings shall be provided on both sides of the ball, rod, tube or compartment mills with bottom less than two hundred forty (240) centimeters above the floor level.

Vats and Tanks

Vats, pans and open tanks containing hot, corrosive or poisonous liquid with openings on top less than one (1) meter above the floor or working level shall be guarded on all sides by enclosure or standard railings.

Furnace, Kilns and Ovens

Pits or floor openings in furnaces, kilns and ovens shall be provided with standard railings and toeboards on all sides.

Traveling cranes

Footwalks or platforms on traveling cranes shall be provided with standard railings on all open sides.

Other machines not especially mentioned such as classifier, flotation cells, etc. shall be properly guarded to prevent employees and materials from accidentally falling into it or getting in contact with the moving parts of the machine.

EXPLOSIVE-ACTUATED TOOLS

Rule 1075. Only qualified and trained employee duly authorized by his employer or supervisor shall operate an explosive-actuated tools. He shall be proficient in the safe and proper operation of the specific make and model of the tool.

Rule 1076. Explosive tools and their explosives charges, when not in use, shall be kept in a secured place of storage, inaccessible to unauthorized persons.

Rule 1077. Projectiles shall not be discharged so close to corners or edges as to cause the material to break off, or where the guard or shield would not be effective.

Rule 1078. No explosive-actuated tool shall be used to drive a fastener into a receiving material of cast iron, glazed brick or tile, marble, granite, slate, glass or any other unusually hard or brittle material or into a steel surface with greater hardness than the fastener being used.

Rule 1079. When the hardness of the receiving material or surface is not known, it shall be tested by using a hand-hammer to drive the point of the fastener into a material. If the point of the fastener does not penetrate the surface, no attempt shall be made to use the tool on that surface.

Rule 1080. Explosive-actuated tools shall not be used where flammable or explosive gases, vapors dusts, or substances are present.

Rule 1081. If a misfire occurs, the operator shall continue to hold the tool in the firing position for not less than fifteen (15) seconds and shall, until the cartridge has been ejected, keep the tool pointed in a direction which will not cause injury should an explosion takes place.

FIRE PROTECTION

Rule 1082. For fire protection, all existing provisions of PD 1185, the Fire Code of the Philippine shall be followed.

Rule 1083. The employer shall provide and maintain a sound fire protection program.

Rule 1084. Extra efforts shall be exerted by all employees to prevent the inception of any unnecessary fire in any part of the property.

Rule 1085. Adequate fire escape of approved design shall conform with specific provision of PD 1185 in all working places and in other places where people converge.

Rule 1086. All places shall be provided with approved fire fighting equipment of adequate number and suitable types. Fire fighting equipment shall be frequently inspected/tested, properly maintained and used exclusively for fighting fire only.

Rule 1087. Adequate fire alarm device shall be provided.

Rule 1088. Approved methods of storage, handling, and usage of combustible and flammable materials shall be strictly observed.

Rule 1089. The "No Smoking" regulation at specific designated areas shall be strictly complied with at all times.

Rule 1090. Water shall never be used on any electrical fire.

Rule 1091. Welding and cutting torches shall be turned off when not in use.

Rule 1092. Welding close to highly flammable materials such as paint, oil, gasoline, and the like, if unavoidable, shall be done only under close supervision and that appropriate fire extinguishers and stationary or portable screen of non-combustible materials shall be available for immediate use.

Rule 1093. Any leak, breakage, or any defect on any part of the fire protection system like the hydrant line, sprinkler system, hydrants, fire extinguishers, and the like shall be reported and repaired at once.

Rule 1094. Every mining company shall have a properly trained central fire fighting brigades and fire drill shall be conducted at least once in three (3) months.

Rule 1095. Main door of building where people converge, whether inside or outside, shall open outward and shall not be locked or bolted, especially those leading to fire escape, when there are people inside.

Rule 1096. In the event of a fire, employees shall call for assistance immediately and shall extinguish the fire with any available fire extinguishing device until the fire fighting crew arrives.

Rule 1097. It shall be prohibited for anybody to tamper and/or play with any fire protection equipment.

Rule 1098. Gate valves for fire waterlines from the source or reservoir leading to hydrants and sprinkle system shall be locked to the open positions.

Rule 1099. Fire plans showing positions of the different fire fighting equipment shall be conspicuously posted at strategic places.

Rule 1100. The employer shall provide and adopt a fire alarm code signal which when sounded shall be audible over large area and easily understood by all personnel.

Rule 1101. Fire fighting equipment shall be conspicuously located in such a way that these are easily accessible and can be used with full effectivity in time of emergency.

Rule 1102. Electrical cords shall never be allowed to run under rugs.

Rule 1103. Combustible and other flimsy materials shall not be placed near bulbs that can raise the temperature of proximate objects to such degree as to cause spontaneous combustion.

Rule 1104. No employee shall be permitted to use welding, oxy-acetylene cutting or other hot work equipment at the mine if there is any risk of personal injury or damage to plant or facilities from fire or explosion unless the employees have a hot work permit to undertake such task which is signed by authorized person.

Rule 1105. All electrical installations shall be checked regularly and have all frayed wirings, damaged sockets, switches, and other defective electrical fixtures changed or repaired promptly.

PREVENTION OF MOBILE EQUIPMENT FIRE

Rule 1106. No open flame shall be permitted when inspecting the gas tank, the radiator or the battery.

Rule 1107. No employee shall be allowed to operate mobile vehicles unless the unit is properly checked for any mechanical and electrical defect.

Rule 1108. Loose or broken gaskets, exhaust pipes and mufflers shall be repaired without delay.

TRAFFIC, DRIVING AND TRANSPORTATION

Rule 1109. The company shall ensure that an effective means of traffic control and management are implemented in the mine.

Rule 1110. Traffic control procedures shall conform with the current regulations of the following:

Land Transportation Office – R. A. 4136

municipality controlled areas - Municipal authorities having jurisdiction; and

mine areas-to be promulgated by the management to conform with the Mine Safety Rules and Regulations.

Rule 1111. Responsible flagmen, signalmen or spotters shall be employed to direct traffic and aid drivers/operators in dangerous and poor visibility areas and where heavy traffic exists.

Rule 1112. All vehicles shall be road worthy.

Rule 1113. No person shall be allowed to get on or off a moving vehicle.

Rule 1114. Drivers shall observe road courtesy and speed limits at all times.

Rule 1115. Trucks used for the transportation of personnel should be provided with seats and proper railing or tailgate.

Rule 1116. When transporting long material, the load should be ~~tie~~ properly secured to avoid shifting. Any material extending from truck should be provided with a warning device.

Rule 1117. The employer shall ensure that all drivers/operators:

be required to undergo an annual physical checkup. Rejection or approval slips from the Medical Department shall be forwarded to the supervisor concerned;

hold a valid driver's license;

not permitted to carry passengers without proper authorization;

are allowed to drive under the influence of liquor or drugs;

be thoroughly acquainted with the vehicle's maximum safe capacity, in order to avoid overloading.

Rule 1118. The driver shall stop when there is need to use hand held radio, cellular phone and other similar communication devices.

WAREHOUSING

Rule 1119. Smoking shall be absolutely prohibited in storage areas where flammable materials are stored and a sign to that effect shall be conspicuously displayed.

Rule 1120. Employee shall use only properly designed bin ladders.

Rule 1121. Aisles shall be of appropriate width and free from obstructions.

Rule 1122. Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage, vegetation control shall be exercised when necessary.

Rule 1123. Highly combustible materials such as paints, lacquers, chemicals and the like shall be stored in separate building.

STORAGE

Rule 1124. Heavy, slender objects if stored upright shall be well secured against toppling down.

Rule 1125. Rolling objects when stored on open shelves shall be properly blocked or wedged.

Rule 1126. In multiple decking, heavier material shall be stored on the lower levels. Small and easily handled objects shall be in the upper decks.

Rule 1127. Bagged materials not palletized and strapped shall be piled cross-tied with the bag mouths towards the center of the pile.

Rule 1128. Materials shall not obstruct fire alarm boxes, sprinkler system controls, fire extinguishers, first-aid equipment, lights, and electric switches and fuse boxes.

Rule 1129. In storing compressed gas cylinder:

cylinders shall be stored in a safe, dry, well-ventilated place prepared and reserved for the purpose. Flammable substances, such as oil volatile liquids, shall not be stored in the same area.

cylinders of oxygen shall not be stored in rooms close to cylinders containing flammable gases. Unless these are stored apart, oxygen cylinders and flammable gas cylinders shall be separated by a fire resistant partition.

acetylene and liquefied fuel gas cylinders shall be stored with the valve end up.

acetylene storage rooms and buildings shall be well ventilated and open flames shall be prohibited. Storage room shall have no other occupancy.

cylinders shall not be stored near sources of heat, such as radiators or furnaces or near highly flammable substances like gasoline.

a direct flame or electric arc shall never be permitted to come in contact with any part of a compressed gas cylinder.

Rule 1130. Flammable liquids

Storage of flammable liquids in open container shall not be permitted. Approved containers for flammable liquid shall be closed after each use.

Specification limiting the quantity of each class of flammable liquids that may be stored in various locations on plant premises, together with data describing the required conditions and procedures relating to such storage shall conform with NFPA Standard No. 30.

HANDLING

Rule 1131. Proper method of lifting and carrying shall be used. Assistance for heavy load shall be obtained.

Rule 1132. When two or more men are lifting objects together, one man shall give the signal to lift or lower in unison. They shall keep in step when carrying.

Rule 1133. Heavy hand trucks or dolly up on incline shall be pulled and not pushed.

Rule 1134. Wheelbarrows shall be pushed, not pulled.

Rule 1135. Powered industrial trucks in handling :

lift trucks when used in handling materials shall have substantial overhead guards and load back rest extension. Lift trucks shall be equipped with mechanical hoist and tilt mechanism.

a crane truck used in material handling shall be equipped with a load limiting device and its operation shall be governed by a standard code signals.

tractors and trailers used in material handling shall carry a nameplate showing the weight of the truck and its rated capacity. Exposed moving parts shall always be guarded.

gasoline trucks shall be filled at designated locations, preferably in the open air with the filling hose and equipment properly grounded.

Rule 1136. Rope, chains and slings

Specific safety precautions shall apply to using and steering rope, rope slings, wire rope, chain and chain slings.

Rule 1137. Flammable and combustible liquids

Only trained employees shall load or unload tanks containing flammable liquids.

Tank trucks, tank trailers and tank semi-trailers used for transportation of flammable liquids shall be constructed and operated according to standard.

Rule 1138. Compressed Gas Cylinders

No person shall remove or change numbers or mark stamped on cylinders.

Cylinders shall be rolled on bottom edge but never dragged.

Cylinders shall be protected from cuts or abrasions and shall not be subjected to hot works.

Compressed gas cylinders shall not be lifted by an electro-magnetic. Where cylinders must be handled by a crane or derricks, these shall be carried in a cradle or similar device.

Cylinders shall not be dropped nor be made to strike against each other.

Cylinders shall not be used as rollers, supports or for any purposes other than to contain gas.

No person shall tamper with safety device of cylinders.

All cylinder gas shall always be considered as full and shall be handled with care.

No oil or grease shall be applied on the valve set of compressed gas cylinders

Rule 1139. Objects with specific shapes

Boxes shall be handled by grasping the alternate top and bottom corners and draw a corner between the legs.

Locked materials shall be grasped at opposite corners.

Sheet metal shall be handled with leather gloves, hand leathers, or gloves with metal inserts. Bundles of sheet metal shall be handled with power equipment.

Window glass or other sheet glass shall be handled with gloves or hard leathers while the wrists and forearms shall be covered with long leathery sleeves.

Long objects, like pipe, bar stock, or lumber shall be carried over padded shoulder, with the fronthand held as high as possible except when passing under low power lines.

Heavy circular flat objects (such as car wheels or tank covers) shall be handled by power equipment designed for the purpose.

Smoking is prohibited while lifting heavy objects or carrying or assisting to lift or carry objects.

Rule 1140. Clearance limits

Appropriate clearance signs to warn of clearance limits shall be provided.

Rule 1141. Bottled chemicals should be crated and palletized before shipment. Cushion materials must be used to avoid jarring movements during transportation. As much as possible chemicals and reagents must be covered with plastics inside the crate for protection from the rain. (to be incorporated in section 6 of Materials Storage and Handling Chapter)

Rule 1142. Drivers of transport vehicle must be properly informed of the kind of cargo and its risks.

COAL-STORAGE

Rule 1143. Coal stockpile shall be built on open, clean, well drained ground, far from sources of heat and kept three (3) meters within acceptable height of pile.

Rule 1144. Foreign matters, such as woods, stones, metals or other combustible materials shall be kept away from the stockpile.

Rule 1145. Regular monitoring of coal temperature at stockpile shall be carried out at points not more than four (4) meters apart, giving special attention to the corners of the stockpile.

Rule 1146. Smoldering coal shall be segregated immediately from the rest of the stockpile and shall be drenched with water until the smoldering stops.

Rule 1147. Necessary precaution shall be taken to exclude air by compacting the coal uniformly and avoiding segregation of different sizes.

Rule 1148. Firebreaks of at least three (3) meters wide shall be kept between stockpile.

Rule 1149. Unauthorized persons shall not be permitted to climb or roam in and around the stockpile.

HANDLING

Rule 1150. The First-In-First-Out (FIFO) basis in receiving/issuing uniform quality coal to/from storage area shall be observed.

Rule 1151. Coal deliveries with unusually high volatile and combustible matters (VCM) shall be segregated and shall be used ahead of others.

Rule 1152. Dry, crushed, and fine coal shall be protected from the wind as well as from rain.

Rule 1153. To prevent coal dust explosion, the following conditions shall be strictly observed:

coal dust concentration in the air space shall not be more than 40 grams per cubic meters of air.

oxygen concentration in the air space shall not be more than 12% free oxygen by volume.

coal temperature shall not exceed 200° C.

CONSTRUCTION SAFETY USE AND CARE OF HAND TOOLS

Rule 1154. Defective tools shall never be used.

Rule 1155. Only suitable tools for a certain job shall be used.

CONSTRUCTION AND INSTALLATION OF LADDERS

Rule 1156. Portable ladder shall:

be placed on secured footing, steadied by a man or secured with a rope.

be placed on a position such that the footing is approximately one-fourth the length of the ladder from the vertical plane of the support.

not be used as walkway or as scaffold.

never be installed in front of door/s that open towards the ladder unless the door is locked, blocked or guarded.

not be placed near live electric wiring installation or against any operational piping where damage may be done.

not be used when defective. It shall be tagged, or marked so that it will be replaced or discarded.

be kept clean and free of grease.

Rule 1157. Fixed ladder shall:

project at least 60 centimeters above any platform unless convenient and sufficient handholds are provided.

be installed at an angle not greater than seventy (70) degrees from the horizontal. be staggered so that no section of the ladder is directly in line with the next adjacent section.

be constructed with rungs placed at equal intervals of 35 cm.

be clean or free of obstructions.

be provided with appropriate guards e.g. ring guards, above 3 meters from the ground, if vertical.

WORKING ON TOP PLATFORM AND SCAFFOLDS

Rule 1158. Employees shall not work directly above other workers except in cases of absolute necessity and in such case, all precautions shall be taken to ensure the safety of the employees working below.

Rule 1159. When men are working overhead:

no person shall be permitted to pass or stay underneath.

materials and tools shall never be thrown or freely dropped.

these shall be lowered with a rope.

Rule 1160. It shall be prohibited to leave loose materials such as bottles, cans, metals and wood scraps along passageways, platforms or scaffolds.

Rule 1161. Before working on a scaffold or platform of any description, (one) employee shall personally see that the supports are properly erected and in safe condition.

Rule 1162. Platforms and scaffolds of permanent construction and installation shall be provided with adequate guardrails.

Rule 1163. Openings along passageways shall be adequately guarded, barricaded off and conspicuously marked.

CIVIL WORKS

Rule 1164. The following shall govern excavation:

excavations with depth of one and one-half (1.5) meters or more shall be properly shored and braced, otherwise these shall be retained to prevent cave-ins.

trees, boulders or other surface encumbrances located within or contiguous to the area to be excavated shall be removed sufficiently ahead of excavating work.

excavated materials shall be kept away at a safe distance from the edge of the excavation.

wherever there is danger of undermining adjacent foundations, excavation works shall be done in short sections and the building walls effectively shored up or braced.

wherever possible, power machines used for excavating shall be placed so that the operator is on the side away from the bank.

excavations shall be adequately guarded by railings. During the hours of darkness, exposed sides of excavations shall be adequately illuminated.

proper crosswalks or double planks shall be used to get across excavations. excavations over two (2) meters in depth shall be supplied with at least one ladder for every three (3) meters or fraction thereof. A ladder shall extend at least 60 cm. from the trench bottom to ground level.

ramps and walkways entering excavations shall be wide enough for men or vehicles. These shall be substantially constructed with proper braces and supports and shall be provided with guardrails. When inclined to a grade of one is to six (1:6), walkways shall be properly secured.

employees engaged in scaling, sloping or trimming works shall use safety ropes.

if derricks or other heavy objects are placed close to the edge of an excavation, additional bracing shall be installed.

Rule 1165. The following shall govern road works:

adequate warning signs shall be provided at approaches of at least fifty (50) meters from the working areas.

adequate detour signs shall be provided when road is under repair or is not passable.

railings shall be installed when weather conditions create a hazard.

DEMOLITION

Rule 1166. Before demolishing a building, a definite plan, based on a careful study of the structure that is to be demolished and of its surroundings shall be worked out.

Rule 1167. When necessary adjoining buildings shall be promptly and thoroughly shored.

Rule 1168. Gas pipes shall be disconnected and all electric wires shall be de-energized.

Rule 1169. Demolition shall be carried out in a regular and orderly manner from top to bottom of the structure. All materials displaced shall be transported immediately to the ground

unless required for re- construction. No material shall be stored on any portion of a structure in excess of its safe carrying capacity. All glasses and sashes shall be removed before any other demolition is started.

Rule 1170. Chutes shall be provided for the removal of bricks or other loose debris and these chutes shall be completely enclosed. Chutes shall not extend in an unbroken line for more than two (2) storeys, and gates or stops shall be placed at the bottom of each chute. Danger signs shall be placed at chute outlets.

Rule 1171. The space where torn material falls shall be provided by a fence.

Rule 1172. Old materials and rubbish shall be removed immediately and shall not be allowed to accumulate on floors nor on the ground just outside the building.

Rule 1173. Before demolishing any interior or exterior wall which is within three (3) meters of any opening in the floor immediately below it, such opening shall be substantially covered unless all workmen are removed from all floors below and access to such floors is positively prevented.

Rule 1174. Walls shall be left stable with no danger of being overturned at the end of each working day.

Rule 1175. Constructional sheds and toolboxes shall be so located as to protect employees from the danger of falling objects.

Rule 1176. Openings into which employees may fall or slip from a floor, platform, passageway or working level shall be covered or protected by a standard railing and toeboard.

Rule 1177. Steel structure shall be demolished column length by column length and tier by tier. Every structural member being dismembered shall not be under any stress other than its own weight and such member shall be chained or lashed in place to prevent any uncontrolled swinging or dropping from the building and shall be lowered carefully.

PAINTING

Rule 1178. The following shall govern painting works:

food shall be kept away from spray painting sites.

unless clearly impracticable, ventilation shall be provided while painting is carried on in a confined space.

painting shall not be done where the paint will contaminate the air breathed by other employees.

paints which contain materials injurious to expose parts of the body shall not be applied by spray-gun.

when acid is used in washing buildings, goggles, rubber gloves, rubber suits, or other suitable protective equipment shall be worn by the building-washer.

WELDING AND CUTTING OPERATIONS

Rule 1179. Only authorized persons shall operate and use welding and cutting equipment. Any welding or cutting job shall be with the knowledge and consent of the supervisor.

Rule 1180. Welding or cutting operations on containers filled with explosives or flammable substances is strictly prohibited. For closed containers that contain explosives or flammable substances, said operations shall only be undertaken after these have been opened, emptied and thoroughly cleaned and freed from combustible gases or vapors. If applicable, the container shall be filled with inert gas or water.

Rule 1181. Employees directly engaged or assisting in welding or cutting operation shall be provided with proper and adequate personal protective equipment.

Rule 1182. Welding and cutting operations that are carried out or done in places where persons other than the welders are working shall be enclosed in a suitable, stationary or portable screen of non-combustible material.

Rule 1183. When welding or cutting operations are performed in a confined space where there is danger of inhalation of any toxic fumes, gases, or dust, adequate ventilation shall be provided and appropriate respiratory protective equipment shall be used.

Rule 1184. Torch shall not be lighted or be struck when combustible gases or vapors are present.

Rule 1185. Welders shall always be equipped with appropriate portable fire extinguishers when assigned to perform welding or cutting jobs.

Rule 1186. Welding machines shall be located at a safe distance from any tank or wash tank containing oil.

Rule 1187. Defective welding machine shall never be used in welding jobs.

Rule 1188. Only torch lighter shall only be used for lighting gas cutting and welding equipment.

Rule 1189. Every motor generator set or transformer used for arc welding and cutting operations shall be provided with an electrical safety disconnect-switch of adequate ampere rating readily accessible in case of emergency. Portable welding machine shall have quick detaching plug.

Rule 1190. The conditions surrounding the work performed by arc welding and cutting process shall be properly checked to prevent the hazard of electric shock by:

keeping the floor or ground surface dry if conditions under the foot are wet, a dry electrical non-conducting platform shall be used.

instructing the operator to keep exposed parts of his body away from contact with the work, the electrode and holder or any part of structure that is electrically grounded.

requiring the operators to keep their clothing, gloves and feet as dry as possible.

Rule 1191. In case of emergencies where it is necessary to do arc welding or cutting under wet conditions, rubber boots and rubber gloves shall be worn.

Rule 1192. Electrode holder shall be insulated. When electrode holder is not in use, the electrode shall be removed from the holder and the electrode holder hang or laid on a dry, non-conducting surface to prevent contact with workers or electrically-conducting materials.

WHARVES AND DOCKS

Rule 1193. Floats, wharves, and other places where employees work on or above water shall be provided with life jackets and lifebuoys equipped with line.

Rule 1194. Floats, docks, wharves and all elevated vehicular thoroughfares shall be equipped with a substantial guardrail.

Rule 1195. Docks and wharves shall be provided with one ladder for every seventeen (17) meters of length of wharf. Such ladder shall extend from the dock to normal low water level.

Rule 1196. Maximum load capacity must be indicated or posted at any conspicuous place at the entrance to the pier.

Rule 1197. Unauthorized persons and vehicles shall be prohibited at the pier during the loading or unloading time. Other excess materials shall not be allowed to be scattered.

Rule 1198. All wharves and docks shall conform with the rules and regulations provided for by concerned government agencies such as PPA, Coastguard and Customs.

LIQUEFIED PETROLEUM GAS

Rule 1199. All safety rules and regulations of the Department of Trade and Industry on storage and handling of liquefied petroleum gas shall also be embodied in this order.

POWERS AND DUTIES

Rule 1200. The Director (Mines and Geosciences Bureau) or his duly authorized representatives shall have the power and duty to enforce this Order and all rules and regulations that may hereafter be promulgated concerning the safe and sanitary upkeep of the mine.

Rule 1201. Only the Regional Director (Mines and Geosciences Bureau) or his duly authorized representatives shall have exclusive jurisdiction over the conduct of safety inspection of all installations, surface or underground, in mining/quarrying operations and safety practices in a manner that will not impede or obstruct work in progress of an employer and shall submit to the Director a quarterly report of their inspections and/or monitoring activities. Provided further that the Director or his duly authorized representative/s shall undertake safety and health audit annually or as often as may be necessary to assess the effectivity of the Safety and Health Program of the employer.

Rule 1202. The Regional Director reserves the right to inspect the mine/quarry explosive magazine and audit records of explosives transaction at the expense of the Purchaser's License Holder and at specified rates as may be deemed necessary. Provided, that failure to immediately implement, without justifiable reasons, the recommendation/s to ensure the proper safe keeping and maintenance of explosive and its magazines shall cause for the imposition of administrative sanctions as provided for in the penal provisions of this Order.

Rule 1203. The Director or his duly authorized representatives shall have the power and authority to administer oaths, summon company officials, employees, lessees or other persons having knowledge on the subject of inquiry, inspection or investigation, issue subpoena and

subpoena *duces tecum* requiring the attendance and take testimonies of witnesses or the production of such books, papers, records and other pertinent documents as may be material to a just determination of the matter under investigation inspection or inquiry.

Rule 1204. The Director/Regional Director or his/her authorized representative during the course of safety inspection, investigation and audit may inspect any article, substance, plant or machinery, which is or was on or in the premises, or any work performed on or in the premises or any condition prevalent on or in the premises or remove for examination or analysis, any article, substance, plant or machinery or a part or sample thereof: Provided, That when the Director/Regional Director or his/her duly representative removes any article, substance, plant or machinery or a part or sample thereof, he/she shall issue a receipt to the Contractor/Permittee/Lessee/Permit Holder or person in control thereof.

Rule 1205. The Director/Regional Director or his/her authorized representative may inhibit the Contractor/Permittee/Lessee/ Permit Holder or its employee from continuing or commencing in performing an act or operating an equipment or machinery, which in the opinion of the Director/Regional Director or his/her duly authorized representative threatens or is likely to threaten the health or safety of any person.

Rule 1206. The Director or his duly authorized representatives shall require the employer to remedy any practice connected with mining operations, which is not in accordance with the provisions of this Order.

The same may summarily suspend, wholly or partially any activity related to mining operations, in case of imminent danger to life or property, until the danger is removed, or until appropriate measures are taken by the employer.

Rule 1207. The Director (Mines and Geosciences Bureau) or his duly authorized representatives may grant relief or exemption from compliance with any of the rules in this Order upon written request or application by the employer concerned, after proper investigation and favorable recommendation of the Bureau engineers, and under such terms and conditions that may be issued by the Director.

PENAL PROVISIONS

Rule 1208. Any employee who violates any of the provisions of this Order or commits any unsafe act or cause condition that will endanger himself, other persons and/or company property shall, on the initiative of his employer or upon recommendation of the Director or Regional Director, be subject to disciplinary action. In case of refusal by the employer, the Director shall act on the matter accordingly.

Rule 1209. Any employer who violates any of the provisions of this Order shall be subject to corresponding penalties prescribed hereunder, pursuant to Section 109 and 110 of R.A. 7942.

Schedule of Penalties on the following Offenses:	Penalty
1. Failure of the company to install corrective measures to mitigate unsafe condition as defined in the annual safety and health program.	P5,000.00
2. Failure to submit/report fatal and serious accidents to concerned RO within 15 days after the date of the accident.	P10,000.00

3. Failure to give notice to the concerned RD within 24 hours of any fatal and non-fatal serious injuries.	P5,000.00	
		Basic Daily
4. Late submission of monthly accident reports or Safety and Health Program		
1 st Violation	P1,000.00	P10.00
2 nd Violation	P2,000.00	P20.00
3 rd Violation	P3,000.00	P30.00
5. Submission of monthly accident reports after one (1) month from the prescribed reporting period.		
1 st Violation	P2,000.00	P20.00
2 nd Violation	P3,000.00	P30.00
3 rd Violation	P4,000.00	P40.00
6. Any violation of other provisions not mentioned above	P1,000.00	
7. Repeat violation of the same provisions as based on inspection reports.	P2,000.00	

Provided, that a late report classified under non-submission category shall not pay the accumulated fine in (4) but instead pay the fines imposed in (5) above. Provided further, that the total fine for non-submission of any of the required reports at any one time shall not exceed Five thousand pesos (5,000.00).

FINAL PROVISIONS

If any rule of this Order is held or declared unconstitutional or invalid by a competent court, the remaining parts of this Order shall continue to be in force as if the rules so annulled or voided had never been incorporated in this Order. All rules applicable elsewhere in this Order shall also apply.

Mines Administrative Order No. MRD-51, Series of 1991 and all rules and regulations or parts thereof in conflict or inconsistent with any of the rules of this Order are hereby repealed or modified accordingly. The Secretary shall have the authority, *inter alia*, to amend, revise, add to, clarify, supplement, interpret, delete or make exemptions (to the extent not contrary to this Order) to any provision of these Order with the end in view of ensuring that the Order is appropriately implemented, enforced and achieved. The guidelines, standards and other documents to be incorporated in this Order shall be promulgated by the Director.

CHAPTER XIII FINAL PROVISIONS

Article A. **General Penal Provision**

Section 13A.01. Penalty. Any violation of the provisions of this Code, or of the rules and regulations promulgated under the authority of this Code, but not covered by a specific penalty hereof shall be punished by a fine of not exceeding Five Thousand Pesos (P5,000.00) or imprisonment of not exceeding One (1) year, or both fine and imprisonment, at the discretion of the Court.

If the violation is committed by any juridical entity, the President, General Manager, or any person entrusted with the administration thereof at the time of the commission of the offense shall be held responsible or liable thereof.

Section 13A.02. Imposition of Penalty. Any person who commits an offense which is punishable under the provisions of this Code but not punishable under any other existing laws shall be penalized only under the provisions hereof. If the offense committed is punishable both under the provisions of this Article and that of other existing laws, it shall be prosecuted only under either but not in both, otherwise the offender will be twice put in jeopardy of punishment for the same offense which is prohibited under Section 21, Article III of the Philippine Constitution.

Section 13A.03. Penalty for Other Offenses. The conviction of any person for any offense under this Code shall not bar his prosecution for any other offenses which may have been committed by such person concurrently with the commission of the offense for which he was convicted or in doing the act or series of acts which constituted the offense for which he was convicted.

Article B. Separability, Applicability, Repealing and Effectivity Clauses

Section 13B.01. Separability Clause. If, for any reason, any provision, section or part of this Code is declared not valid by a Court of competent jurisdiction or suspended or revoked by the authorities concerned, such judgment shall not affect or impair the remaining provisions, sections or parts which shall continue to be in full force and effect.

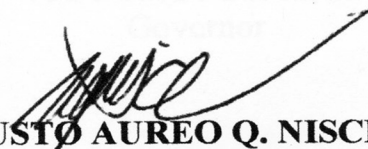
Section 13B.02. Applicability Clause. All other related matters not specifically provided in this Code shall be governed by the pertinent provisions of existing applicable laws or ordinances.

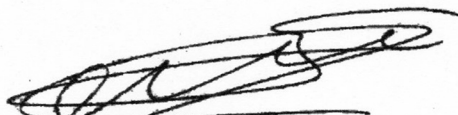
Section 13B.03. Repealing Clause. All ordinances, rules and regulations, or parts thereof, in conflict with, or inconsistent with any provisions of this Code are hereby repealed or modified accordingly. Should there be existing general or special ordinances which were inadvertently excluded in the codification process during the formulation of this Code, they shall continue to be in full force and effect provided that they are not in conflict with, or contrary to, the provisions of this Code.

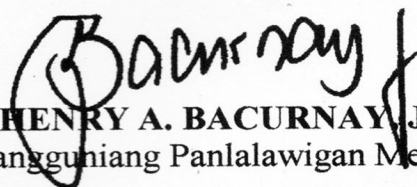
Section 13B.04. Effectivity. This Code shall take effect after thirty (30) days from the date of its approval.

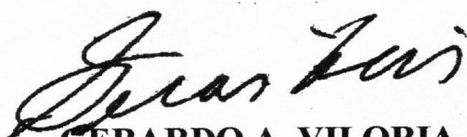
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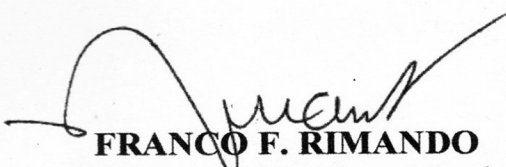
Certified to be duly Adopted:

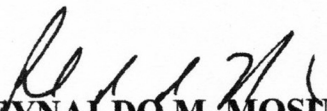

AUGUSTO AUREO Q. NISCE
Vice-Governor
Presiding Officer


JONATHAN JUSTO A. ORROS
Sangguniang Panlalawigan Member

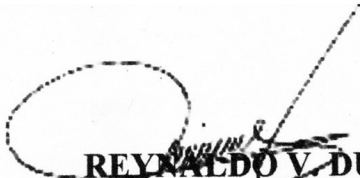

HENRY A. BACURNAY JR.
Sangguniang Panlalawigan Member


GERARDO A. VILORIA
Sangguniang Panlalawigan Member



FRANCO F. RIMANDO
Sangguniang Panlalawigan Member




REYNALDO M. MOSUELA
Sangguniang Panlalawigan Member



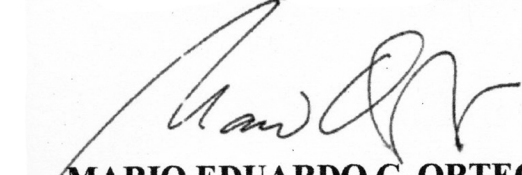
REYNALDO V. DULAY
Sangguniang Panlalawigan Member



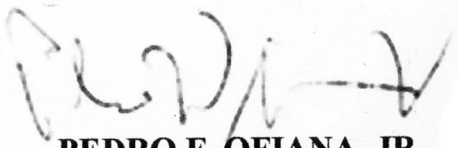
HERMENEGILDO A. GUALBERTO
Sangguniang Panlalawigan Member



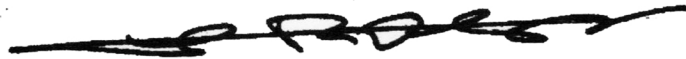
MA. ANNABELLE S. DE GUZMAN
Sangguniang Panlalawigan Member



MARIO EDUARDO C. ORTEGA
Sangguniang Panlalawigan Member

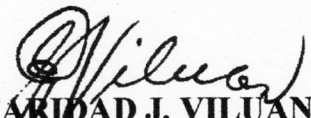


PEDRO F. OFIANA, JR.
Sangguniang Panlalawigan Member



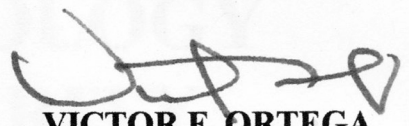
FRANCISCO EMMANUEL R. ORTEGA III
Sangguniang Panlalawigan Member

ATTESTED:



CARIDAD J. VILUAN
Secretary to the Sanggunian

NOTED:



VICTOR F. ORTEGA
Governor