

**GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA
No. 18 OF 1999**

**ON
THE MANAGEMENT OF THE WASTE OF HAZARDOUS AND TOXIC
MATERIALS**

THE PRESIDENT OF THE REPUBLIC OF INDONESIA,

Considering:

- a. that it is necessary to maintain the sustainability of the environment so that it will continue to be capable of supporting the implementation of sustainable development;
- b. that increasing development in all areas, particularly the development in the industrial area, also entails increasing quantity of the waste generated, including hazardous and toxic waste, which may disturb the environment and human health;
- c. that with the promulgation of Law No. 23/1997 on environmental management, it is necessary to make adjustment to Government Regulation No. 19/1995 jo Government Regulation No. 12/1995 on the management of the waste of hazardous and toxic materials;
- d. that in connection with the above-mentioned matter, it is deemed necessary to stipulate a government regulation on the management of the waste of hazardous and toxic materials.

In view of:

1. Article 5 sub-article (2) of the Constitution of 1945;
2. Law No. 23/1997 on environmental management (Statute Book No. 68/1997, Supplement to Statute Book No. 3699):

DECIDES

To stipulate:

**A GOVERNMENT REGULATION ON THE MANAGEMENT OF THE
WASTE OF HAZARDOUS AND TOXIC MATERIALS**

CHAPTER I GENERAL PROVISIONS

Article 1

Referred to in this government regulation as:

1. waste is the residue left by an undertaking and/or activity;
2. waste of a hazardous and toxic materials, abbreviated as B3 waste, is the residue of an undertaking and/or activity which contains a hazardous material and/or which, owing to its nature and/or concentration and/or quantity, either directly or indirectly, may contaminate and/or damage the environment and/or imperil the environment and the health as well as the survival of human beings and other living creatures;
3. B3 waste management is a series of activities encompassing reduction, storage, collection, transportation, utilization, processing and land filling of B3 waste;
4. B3 waste reduction is an activity on the part of the generating party to reduce the quantity and the hazardous and toxic nature of B3 waste, prior to it being generated by an activity;
5. a party generating B3 waste is a person, whose undertaking and/or activity generates B3 waste;
6. B3 waste collector is a business company undertaking an activity of collection with a view to collecting B3 waste before it is sent to a site of B3 waste treatment and/or utilization and/or landfilling;
7. B3 waste transporter is a business company undertaking the activity of transporting B3 waste;

8. a party utilizing B3 waste is a business company undertaking the activity of utilizing B3 waste;
9. a party treating B3 waste is a business company operating a B3 waste treatment facility;
10. a party landfilling B3 waste is a business company undertaking the activity of landfilling B3 waste;
11. a supervisor is an official assigned in a government agency responsible to exercise supervision over B3 waste management;
12. storage is the activity of storing B3 waste by a party generating and/or collecting and/or utilizing and/or treating and/or landfilling B3 waste with a view to storing it temporarily;
13. B3 waste collection is an activity of collecting B3 waste from a party generating B3 waste with a view to temporarily storing it prior to handing it over to a party utilizing and/or processing and/or landfilling B3 waste;
14. the transportation of B3 waste is an activity of moving B3 waste from a party generating and/or collecting and/or utilizing and/or treating B3 waste to a party collecting and/or utilizing and/or treating and/or storing B3 waste;
15. the utilization of B3 waste is an activity of recovery and/or reuse and/or recycle with a view to changing B3 waste into a product which may be used and must also be safe to the environment and human health;
16. B3 waste treatment is a process of changing the characteristics and composition of B3 waste to remove and or reduce the hazardous and/or toxic nature;

17. the landfilling of B3 waste is an activity of placing B3 waste in a landfilling facility in order not to imperil human health and the environment;
18. a person is an individual and/or a group of persons and or a statutory body;
19. a responsible government agency is a government agency responsible in the area of controlling environmental impacts;
20. the Minister is the minister assigned to manage the environment.

Article 2

The management of B3 waste is aimed at preventing and overcoming environmental contamination and/or damage caused by B3 waste so that the quality of contaminated environment will be restored in accordance with its original function.

Article 3

Everyone wishing to undertake a business and/or activity which will generate B3 waste is prohibited to dump the B3 waste generated directly into the environmental medium without first treating it.

Article 4

Everyone or business company undertaking the activities of storing, collecting, transporting, treating and landfilling of B3 waste is prohibited to dilute the B3 waste in order to lower the concentration of the toxic and hazardous substance of the B3 waste.

Article 5

The management of radio-active waste is conducted by a government agency responsible for the management of radioactivity pursuant to the prevailing laws.

CHAPTER 11
B3 WASTE INDICATION

Article 6

B3 waste may be identified in accordance with its source and characteristics.

Article 7

- (1) According to their sources, the types of B3 waste encompass:
 - a. B3 waste from a non-specific source;
 - b. B3 waste from a specific source;
 - c. B3 waste and expired chemicals, spilling, used package, and disposed products that fail to fulfill specifications.
- (2) List of waste under the waste codes of D220, D221, D222 and D223 may be declared B3 waste after a Toxicity Characteristic Leaching Procedure (TCLP) test and/or a characteristics test has been conducted.
- (3) Details of each type as meant in sub-article (1) are as set forth in attachment I of this government regulation.

Article 8

- (1) Waste not included in the list as meant in article 7 sub-article (3) will be identified as B3 waste if, after going through testing, will have one or more of the following characteristics:
 - a. easily exploding;
 - b. inflammable;
 - c. reactive nature;
 - d. toxicity;
 - e. causing infection; and
 - f. corrosive in nature.
- (2) The waste included in the category of B3 is other waste which, if it is tested with a method of toxicology, has its LD50 under the threshold value already stipulated.

CHAPTER III AGENTS OF MANAGEMENT

First Part Generating Parties

Article 9

- (1) Everyone undertaking a business and/or activity which uses hazardous and toxic materials and or generates B3 waste is obligated to reduce the B3 waste, treat the B3 waste and/or landfill the B3 waste.
- (2) If the reduction activity as meant in sub-article (1) still generates B3 waste and the said B3 waste can still be utilized, the party generating it can utilize it for his own purpose or leave the utilization to the party utilizing B3 waste.
- (3) Everyone generating B3 waste is obligated to treat B3 waste generated in accordance with the existing technology and if it cannot be treated at home it may be exported to another country with a B3 waste-treating technology.
- (4) The treatment and/or landfilling of B3 waste as meant in sub-article (1) may be conducted by the party generating B3 himself or the party generating B3 waste may leave the treatment and/or landfilling B3 waste generated by him to a party treating and/or landfilling B3 waste.
- (5) B3 waste is delivered to the party utilizing it as meant in sub-article (2), in order to be exported as meant in sub-article (3), and to a party treating and/or landfilling B3 waste as meant in sub-article (4) irrespective of the responsibility of the party generating B3 waste to treat the B3 waste he generates.
- (6) The provision on the treatment of B3 waste generated from household and small-scale activities will be stipulated later by the head of a responsible government agency.

Article 10

- (1) The party generating B3 waste may store B3 waste generated for a maximum of 90 (ninety) days before delivering it to the collector of or the party utilizing or treating or landfilling B3 waste.**

- (2) If the B3 waste generated is less than 50 (fifty) kgs per day, the party generating B3 waste may store the B3 waste generated for over 90 days before delivering it to the party utilizing or treating or landfilling B3 waste with an approval from the head of a responsible government agency.**

Article 11

- (1) A party generating B3 waste is obligated to make and keep records on:
 - a. the types, characteristics, quantity and time of the B3 waste generated;**
 - b. the types, characteristics, quantity and time of the delivery of B3 waste;**
 - c. the name of the transporter of B3 waste undertaking the dispatch to the collector of or the party utilizing or treating or landfilling B3 waste.****

- (2) A party generating B3 waste is obligated to submit the records as meant in sub-article (1) at least once in six months to a responsible government agency with copies to be addressed to relevant government agencies and the rency head/municipality head/head of a second-level region concerned.**

- (3) The records as meant in sub-article (1) will be used:
 - a. to make an inventory of the quantity of B3 waste generated;**
 - b. as a material for evaluation in the framework of the stipulation of policies in B3 waste treatment.****

Second Party Collectors

Article 12

B3 waste collectors are companies that have B3 waste collecting activity.

Article 13

- (1) B3 waste collectors are obligated to make records about:
 - a. the types, characteristics, quantity of B3 waste and the time of the receipt of B3 waste from the party generating B3 waste;
 - b. the types, characteristics, quantity and time of the delivery of B3 waste to the party utilizing and/or treating and/or landfilling B3 waste;
 - c. the name of the transporter of B3 waste undertaking the dispatch to the party utilizing and/or treating and/or landfilling B3 waste.
- (2) Collectors of B3 waste are obligated to submit the records as meant in sub-article (1) at least once in six months to a responsible government agency with copies to be addressed to the regency head/municipality head/head of a second level region concerned.
- (3) The records as meant in sub-article (1) will used:
 - a. to make an inventory of the quantity of B3 waste collected;
 - b. as a material for evaluation in the framework of the stipulation on policies in B3 waste treatment.

Article 14

- (1) Collectors of B3 waste may store the B3 waste collected for a maximum of 90 (ninety) days before delivering it to the party utilizing and/or treating and/or landfilling B3 waste.

- (2) Collectors of B3 waste are responsible for the B3 waste already collected.

Third Part Transporter

Article 15

- (1) B3 waste transportation will be conducted by a business company undertaking B3 waste transportation activities.
- (2) The transportation of B3 waste may be conducted by the party generating B3 waste in the case of waste he himself generates.
- (3) If the party generating B3 waste act as B3 waste transporter, he will be obligated to fulfill the provision prevailing for B3 waste transporters.

Article 16

- (1) Every B3 waste transportation by a B3 waste transporter must be covered by a B3 waste document.
- (2) Further provisions on the model of the B3 waste documents as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

Article 17

A B3 transporter is obligated to deliver B3 waste and B3 documents as meant in Article 16 sub-article (1) to the collector and/or the party utilizing and/or treating and/or landfilling B3 waste appointed by the party generating B3 waste.

Article 18

B3 waste will be utilized by a party generating B3 waste or a business company undertaking the activity of utilizing B3 waste.

Article 19

- (1) A party utilizing B3 waste generating B3 waste will be obligated to fulfill the provisions on parties generating B3 waste.
- (2) A party utilizing B3 waste collecting B3 waste in its activity must fulfill the provisions on the collectors of B3 waste.
- (3) A party utilizing b3 waste undertaking the transportation of B3 waste must fulfill the provisions on the transporters of B3 waste.

Article 20

A party utilizing B3 waste may store B3 waste before utilizing it for a maximum of 90 (ninety) days.

Article 21

A party utilizing B3 waste is obligated to make and keep records on:

- a. the sources of B3 waste utilized;
- b. the types, characteristics and quantity of B3 waste collected;
- c. the types, characteristics and quantity of B3 waste utilized and the products turned out;
- d. the name of the transporter undertaking the transportation of B3 waste from the party generating and/or collecting B3 waste.

Article 22

- (1) A party utilizing B3 waste is obligated to submit the records as meant in article 21 at least once in six months to a responsible government agency with copies to the head of a relevant government agency and the regency head/municipality head/head of a second-level region concerned.
- (2) The records as meant in sub-article (1) will be used:
 - a. to make an inventory of the quantity of B3 waste utilized;
 - b. as a material of evaluation in the framework of the stipulation of policies in B3 waste treatment.

**Fifth Part
Treating party**

Article 23

- (1) A B3 waste treating party may be the party generating B3 waste or a business company undertaking an activity of treating B3 waste.
- (2) A party treating B3 waste may store B3 waste which will be treated for a maximum of 90 (ninety) days.
- (3) A party treating B3 waste may store B3 waste generated for a maximum of 90 (ninety) days.

Article 24

- (1) A party treating B3 waste is obligated to make and keep records on:
 - a. the sources of the B3 waste treated;
 - b. the types, characteristics, and quantity of B3 waste treated;
 - c. the name of the transporter undertaking the transportation of B3 waste.
- (2) A party treating B3 waste is obligated to submit the records as meant in sub-article (1) at least once in six months to a responsible government agency with copies to a relevant government agency and the regency head/municipality head/head of a second-level region concerned.
- (3) The records as meant in sub-article (1) will be used:
 - a. to make an inventory of the quantity of the B3 waste utilized;
 - b. as a material of evaluation in the framework of the stipulation of policies in B3 waste treatment.

**Sixth Part
Stockpiling party**

Article 25

- (1) A B3 landfilling party is a business company undertaking an activity of landfilling B3 waste.

The landfilling of B3 waste may be conducted by a generating party in order to stockpile B3 waste left over from its own business and/or activities.

Article 26

A B3 waste landfilling party is obligated to make and keep records on:

- a. the sources of B3 waste landfilled;
- b. the types, characteristics and quantity of B3 wastes landfilled;
- c. the name of the transporter undertaking the transportation of B3 waste.

A B3 waste landfilling party is obligated to submit the records as meant in sub-article (1) at least once in six months to a responsible government agency with copies to a relevant government agency and the regency head/municipality head/head of a second-level region concerned.

The records as meant in sub-article (1) will be used:

- a. to make an inventory of the quantity of B3 waste utilized;
- b. as a material of evaluation in the framework of the stipulation of policies in the treatment of B3 waste.

CHAPTER IV TREATMENT ACTIVITIES

First Part Reduction of B3 Waste

Article 27

B3 waste reduction may be conducted through efforts to improve the storage of raw materials in house-keeping activities, material substitution, process modification and efforts to reduce other B3 waste reduction.

Further provisions on B3 waste reduction as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

Second Part Packing

Article 28

Every packing of B3 waste must be given a symbol and a label showing the characteristics and type of the B3 waste.

Further provisions on the symbol and label of B3 waste as meant in sub-article (1) will be stipulated by a responsible government agency.

Third Part Storage

Article 29

The storage of B3 waste is conducted in a storage place which comply with the requirements.

A B3 waste storage site as meant in sub-article (1) must fulfill the following requirements:

- a. the location of the storage place must be free from flood, not prone to disasters and outside a protection area and must conform to the spatial layout plan;
- b. the construction design of a building must be adjusted to the quantity, characteristics of B3 waste and efforts to control environmental contamination.

Further provisions on the requirements for B3 waste storage as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

Fourth Part Collection

Article 30

The activity of B3 waste collection must fulfill the following provisions:

- a. taking into account of B3 waste characteristics;
 - b. having a laboratory which may detect the characteristics of B3 waste for toxicology;
 - c. having equipment for the management of accidents;
 - d. having water resistant building construction and building materials conforming to the characteristics of B3 waste;
 - e. having a flood-free collection location.
- (2) Further provisions on the requirements as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

Fifth Part Transportation

Article 31

The delivery of B3 waste by a party generating and/or collecting and/or utilizing and/or treating B3 waste to the transporter must be covered with a B3 waste document.

Article 32

The transportation of B3 waste will be conducted by means of a special transportation facility which fulfills the requirements with the transportation procedure being stipulated on the basis of the prevailing laws.

Sixth Part Utilization

Article 33

- (1) The utilization of B3 waste encompasses recovery, reuse and recycle.
- (2) Further provisions on the utilization of B3 waste as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

Seventh Part Treatment

Article 34

- (1) B3 waste treatment can be conducted by thermal means or by means of stabilization and solidification, or in physical, chemical, biological and/or other ways in keeping with the progress in technology.
- (2) The choice of a location for the treatment of B3 waste must fulfill the following provisions:
 - a. being free from flood and not prone to disasters and not being a protected area;
 - b. constituting a location determined as an area designated for industry on the basis of a spatial layout plan.
- (3) The treatment of B3 waste by means of stabilization and solidification must fulfill the following requirements:
 - a. conducting an analysis with the procedure of extraction to determine the mobility of organic and inorganic compounds (Toxicity Characteristic Leaching Procedure);
 - b. conducting landfilling of the outcome stabilization and solidification treatment in conformity with the provision on B3 waste landfill.
- (4) If B3 waste treatment in a physical and/or chemical manner results in:
 - a. liquid waste, the said liquid waste must fulfill the liquid waste quality standard;
 - b. solid waste, the said solid waste must fulfill the provision on B3 waste treatment.
- (5) B3 waste treatment by thermal means with the operation of an incinerator must fulfill the provisions as follows:
 - a. having an incinerator with specifications conforming to the characteristics and quantity of the B3 waste treated;
 - b. having an incinerator which can fulfill a minimum of 99.99% incineration efficiency and destruction and removal efficiency rate as follows:
 - 1) efficiency of destruction and removal for *Principle Organic Hazard Constituents* (POHCs) is 99.99%;

- 2) efficiency of destruction and removal for *Polychlorinated Biphenyl (PCBs)* is 99,9999%;
 - 3) efficiency of destruction and removal for *Polychlorinated Dibenzofurans* is 99.9999%;
 - 4) efficiency for destruction and removal for *Polychlorinated Dibenso-P-dioxins* is 99.9999%.
- c. fulfilling the air emission standard;
 - d. the residue of the incineration activity in the form of ashes and liquid must be managed by complying with the provisions on B3 waste management.
- (6) Further provisions on technical requirements for B3 waste treatment will be stipulated by the head of a responsible government agency.

Article 35

The termination of B3 waste treatment activities by the treating party must obtain a written approval from the head of a responsible government agency.

Eighth Part Landfill

Article 36

The location for B3 waste landfilling must fulfill the following requirements:

- a. free from flood;
- b. maximum soil permeability is 10 to the power of negative 7 centimeter per second;
- c. constituting a location determined as a site for B3 waste landfilling on the basis of a spatial layout plan;
- d. constitution an area which is geologically declared safe, stable, not prone to disasters and outside a protected area;
- e. not constitution an absorption area of ground water, particularly the ground water used as drinking water.

Article 37

- (1) B3 waste landfilling must use a layer system completed with a channel to regulate the flow of surface water, collect alkaline water and its treatment, monitoring wells and final covering layers already approved by a responsible government agency.
- (2) further provisions on the procedure and requirements for B3 waste landfilling will be stipulated by the head of a responsible government agency.

Article 38

The termination of the activities of B3 waste landfilling by the landfilling party must obtain a written approval from the head of a responsible government agency.

Article 39

- (1) Locations for terminated B3 waste landfilling must fulfill the following:
 - a. covering the uppermost part of the landfilling site with soil with a minimum thickness of 0.60 m;
 - b. fencing the B3 waste landfilling site and marking the place;
 - c. monitoring the quality of ground water and managing the adverse impact which may arise as a result of the release of B3 waste into the environment for a minimum of 30 years as from the time when the B3 waste landfilling facility is closed down;
 - d. the location of terminated landfilling cannot be designated as a residential area or for other public facilities;
- (2) Further provisions on the implementation of the obligations as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

CHAPTER V MANAGEMENT

First Part Licensing

Article 40

- (1) Every business company undertaking the activities of:
 - a. storing, collecting, utilizing, treating and/or landfilling B3 waste must possess an operational permit from the head of a responsible government agency;
 - b. the transporter of B3 waste must possess a transportation permit from the Minister of Communications after obtaining a recommendation from the head of a responsible government agency;
 - c. the utilization of B3 waste as the main activity entails the obligation to possess a utilization permit from a government agency authorized to issue a utilization permit after a recommendation from the head of a responsible government agency has been obtained.
- (2) The provision on the procedure for obtaining the permit as meant in sub-article (1) letter a will be stipulated by the head of a responsible government agency and the one as meant in sub-article (1) letters b and c will be stipulated by the head of a government agency authorized to grant such permits.
- (3) The activities of B3 waste treatment integrated with the core activities entail the obligation to obtain an operational permit for B3 waste treatment equipment issued by the head of a responsible government agency.
- (4) The requirements for obtaining the license as meant in sub-article (1) are as follows:
 - a. having an act on establishment as a business company already legalized by an authorized government agency;
 - b. the name and the address of the business company applying for the license;
 - c. the activities conducted;
 - d. the location where the activities are conducted;
 - e. the name and the party of the party responsible for the activities;
 - f. the raw materials and the process of activities used;

- g. the specifications of the waste treatment instrument;
 - h. the amount and the characteristics of B3 waste stored, collected, utilized, transported, processed and landfilled;
 - i. the layout of the waste channel, the waste treatment and the place for temporary storage of B3 waste before it is treated and the site for landfilling after it is treated;
 - j. an instrument to prevent pollution for liquid waste, emission and treatment of B3 waste.
- (5) Further provisions on the procedure for an application for a license as meant in sub-article (3) and the procedure for an application for the recommendation as meant in sub-article (1) letters b and c will be stipulated by the head of a responsible government agency.

Article 41

- (1) A decision on the license and the recommendation on B3 waste treatment issued by the head of a responsible government agency as meant in Article 40 must be announced to the public.
- (2) The procedure for the announcement as meant in sub-article (1) will be regulated further in a decision of the head of a responsible government agency.

Article 42

- (1) A license for the location of B3 waste treatment and landfilling will be issued by the head of the land office in the rency/municipality in accordance with the spatial layout design after a recommendation has been obtained from the head of a responsible government agency.
- (2) The recommendation as meant in sub-article (1) will be based on the result of an examination on the environmental impact and the technical feasibility of the location as meant in Article 34 sub-article (2) and Article 36.

Article 43

- (1) For the activities of collection, utilization, treatment and or landfilling of B3 waste as main activities it is obligatory that an analysis on the environmental impacts should be made pursuant to the prevailing laws.

- (2) The document of the analysis on environmental impacts must be presented along with the application for an operational license as meant in Article 40 sub-article (4) to the responsible government agency.
- (3) The decision on environmental feasibility based on the result of an assessment of the analysis on environmental impacts will be issued by the head of a responsible government agency.

Article 44

- (1) A decision on the application for a license as meant in Article 40 will be given by the head of a responsible government agency at the latest 45 (forty-five) working days as from its receipt.
- (2) The requirements for and the obligations of an analysis on environmental impacts already approved will constitute part which will be made the material for consideration in the issuance of the license as meant in Article 40 sub-article (1).

Article 45

- (1) In the case of new activities generating B3 waste and treating as well as utilizing B3 waste at the same location as that for their main activities, the analysis on environmental impacts on the B3 waste treatment activity will be integrated with the analysis on environmental impacts for the main activities.
- (2) If B3 waste treatment is conducted by the parties generating and utilizing B3 waste at the location of their main activities, only the plan for environmental treatment and that on environmental monitoring which have been approved will be submitted to the responsible government agency along with the application for an operational license as meant in Article 40.
- (3) A decision on the application for a license as meant in sub-articles (1) and (2) will be issued by a responsible government agency at the latest 60 (sixty) days as from the receipt of the plan for environmental management and that on environmental monitoring already approved.

- (4) The requirements and obligations set forth in the plan for environmental management and that on environmental monitoring as meant in sub-article (2) constitute an inseparable part of an application for a license as meant in Article 40.

Article 46

- (1) If the parties generating and/or utilizing B3 waste act as the party treating B3 waste and the location of the treatment is different from the location of the main activities, the activities of treating B3 waste will be subject to the application of the provisions on B3 waste treatment in this government regulation.
- (2) As for the activities of utilizing B3 waste as the main activities, it is obligatory that an analysis on environmental impacts should be made while regarding the activities integrated with the main activities it is obligatory that a plan for environmental management and a plan for environmental monitoring should be made.
- (3) A document of the analysis on environmental impacts will be submitted to the responsible government agency and approval of the said document will be given by the head of the responsible government agency.
- (4) The requirements and obligations set forth in the plan for environmental management and the plan for environmental monitoring already approved must be set forth in the license as meant in Article 40.

Second Part Supervision

Article 47

- (1) Supervision over the management of B3 waste will be exercised by the Minister and the implementation will be left to the responsible government agency.

- (2) The supervision as meant in sub-article (1) will encompass monitoring of the compliance with the requirements and the technical and administrative provisions by the parties generating, utilizing, collecting, transporting, treating and landfilling B3 waste.
- (3) The implementation of supervision over B3 waste management in the regions will be exercised in accordance with the management stipulated by the head of a responsible government agency.
- (4) Supervision over the implementation of an emergency response system at the national level will be exercised by a responsible government agency and at the regional levels by the governors/heads of first-level regions and/or regency heads/municipality heads/heads of second-level regions.

Article 48

- (1) In implementing the supervision over B3 waste management as meant in Article 47 sub-article (1) the supervisor will be completed with an identification card and a letter of assignment issued by the head of a responsible government agency.
- (2) The supervisor as meant in sub-article (1) will be authorized to:
 - a. enter the location of the parties generating, utilizing, collecting, treating and landfilling B3 waste;
 - b. take sample of B3 waste to be examined in the laboratory;
 - c. ask for information related to the implementation of B3 waste management;
 - d. taking pictures to complete the supervision report.

Article 49

The parties generating, collecting, transporting, utilizing, treating and landfilling B3 waste will be obligated to assist the supervisory officer in undertaking his tasks as meant in Article 48 sub-article (2).

Article 50

If in the implementation of supervision there is an indication that there is a criminal act in the environmental area, the supervisor, as an environmental civilian civil servant investigator may undertake investigation.

Article 51

- (1) A responsible government agency will submit a report on the implementation of B3 waste management periodically, at least once in a year, to the President, with a copy to be addressed to the Minister.
- (2) The minister will evaluate the said report in order to draw up a policy on the management of B3 waste.

Article 52

- (1) To maintain the health of workers and supervisors assigned in the B3 waste management area, a health test will be conducted periodically.
- (2) The health test of workers as meant in sub-article (1) will be held by the party responsible for the business and/or activity of B3 waste management.
- (3) A health test for B3 waste management supervisors as meant in sub-article (1) will held by a government agency responsible in the workers' health area.

Third Part Cross-Border Movement

Article 53

- (1) Nobody is allowed to import B3 waste;
- (2) The transportation of B3 waste from abroad through the territory of the Republic of Indonesia for transit purposes must first be covered by a written approval from the head of a responsible government agency.
- (3) The dispatch of B3 waste from abroad through the territory of the Republic of Indonesia must first be notified in writing to the head of a responsible government agency.
- (4) The dispatch of B3 waste abroad can be conducted after a written approval has been obtained from the government of the recipient state and the head of a responsible government agency.

- (5) Further provisions on the trading system of B3 waste will be stipulated by the Minister assigned in the trade area after considerations have been obtained from the head of a responsible government agency.

Third Part Information and Reporting

Article 54

- (1) Everyone is entitled to information about B3 waste management.
- (2) A responsible government agency will be obligated to give the information as meant in sub-article (1) to everyone openly.

Article 55

- (1) Everyone is entitled to report the potential or the fact of the occurrence of contamination of and/or damage to the environment caused by B3 waste.
- (2) Reports on the occurrence of environmental contamination and/or damage will be conveyed either orally or in writing to the government agency responsible or the nearest government apparatuses.
- (3) The government apparatuses receiving the reports as meant in sub-article (2) will be obligated to pass on the said reports to a responsible government agency at the latest 3 (three) working days after the reports have been received.

Article 56

- (1) A government agency receiving the reports as meant in Article 55 will be obligated to immediately follow-up the reports from the community.
- (2) The follow-up process and the results of the reports as meant in sub-article (1) must be notified to the reporting party and/or interested community.

Article 57

The procedure for and mechanism of reporting as meant in Article 55 and 56 will be regulated further in a ministerial decree.

Fifth Part Overcoming and Recovery

Article 58

- (1) Parties generating, collecting, utilizing, treating and landfilling B3 waste will be responsible for overcoming environmental accidents and contamination as a result of the release or spilling of B3 waste for which they are responsible.
- (2) Parties generating, collecting, transporting, utilizing, treating and landfilling of B3 waste must own an emergency response system.
- (3) Parties responsible for B3 management must give information about the emergency response system as meant in sub-article (2) to the community.
- (4) Parties generating and/or collecting and/or transporting and/or processing and/or utilizing and/or landfilling of B3 waste must immediately report the spilling of hazardous and toxic materials (B3) and B3 waste into the environment to the responsible government agencies and/or governors/heads of first-level regions and/or heads of regencies/municipality heads/heads of second-level regions.
- (5) Further provisions on overcoming environmental accidents and contamination as meant in sub-article (1) will be stipulated by the head of a responsible government agency.

Sixth Part
Supervision over and Overcoming of Accidents

Article 59

- (1) The implementation of supervision over overcoming accidents in the region will be conducted by the administrations of second-level regions for the scale which can be overcome by the activities of generating and/or collecting and/or transporting and/or treating and/or utilizing and/or landfilling.
- (2) Regarding the implementation of supervision over overcoming of accidents for the scale which cannot be overcome by heads of second-level regions, the administrations of first-level regions and the administrations of second-level regions will jointly exercise the supervision.
- (3) Regarding the management of accidents on the part of the parties generating and/or collecting and/or transporting and/or treating and/or utilizing and/or landfilling with such a major impact that it will encompass two areas of second level regions, the supervision will be exercised jointly by the administrations of second-level regions and the administration of first-level region.
- (4) Regarding the implementation of managing accidents on the part of the parties generating and/or collecting and/or transporting and/or treating and/or utilizing and/or landfilling with such a major impact that the administrations of second-level regions cannot exercise supervision, the supervision will be exercised by a responsible government agency along with the administrations of second-level regions and the administrations of first-level regions.

Article 60

- (1) Parties generating, collecting, utilizing, transporting, treating and landfilling B3 waste must immediately manage the contamination of or damage to the environment as a result of their activities.

- (2) If the parties generating, utilizing, collecting, transporting, treating and landfilling B3 waste fail to take acts of management as meant in sub-article (1), or fail to take proper acts of management, the responsible government agency may undertake acts of management with the cost to be charged to the parties generating and/or utilizing and/or collecting and/or transporting and/or treating and/or landfilling B3 waste concerned through the governor/head of a first level region.

Sixth Part Financing

Article 61

- (1) All costs arising in obtaining a license and a recommendation for B3 waste treatment will be charged to the applicant of the license.
- (2) The cost of license application as meant in sub-article (1) will encompass the cost of a technical feasibility study for the licensing process.
- (3) To monitor and/or supervise the management of B3 waste conducted by:
- a. a responsible government agency, the cost will be charged to the state's budget;
 - b. a responsible regional government agency, the cost will be charged to the regional budget.
- (4) Further provisions on the management as meant in sub-article (2) will be stipulated by the head of a responsible government agency.

CHAPTER VI SANCTIONS

Article 62

- (1) A government agency responsible to give written warnings to parties generating, collecting, transporting, utilizing, treating or landfilling violating the provisions in Articles 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 49, 52 sub-article (2), 58, 58 and 60.
- (2) If within a period of 15 (fifteen) days as from the issuance of the written warning as meant in sub-article (1) the parties given the warning fail to heed the warning and continue to be not in compliance with the provisions of the article violated, the head of a responsible government agency may suspend or temporarily revoke the licenses for storage, collection, treatment, including landfilling of B3, until the parties given the warning fulfills the provisions violated and if within the stipulated deadline the warning still goes unheeded, the operational license will be revoked.
- (3) A regency head/municipality head/head of a second-level region may suspend operational activities on behalf of an authorized government agency and/or a responsible government agency if the said violation may endanger the environment.
- (4) The head of a responsible government agency is obligated to immediately revoke a decision on the termination of activities as meant in sub-articles (2) and (3) if the parties whose operational activities have been suspended have fulfilled the provisions violated.

Article 63

Whoever violates the provisions of Articles 3, 4, 9, 10, 14, 15, 19, 20, 29, 30, 32, 34, 36, 37, 39 and 60 resulting and/or causing contamination of and/or damage to the environment will be threatened with the penalties as regulated in Articles 41, 42, 43, 44, 45, 46 and 47 of Law No. 23/1997 on environmental management.

CHAPTER VII TRANSITIONAL PROVISIONS

Article 64

- (1) If at the -time this government regulation comes into force, B3 waste management and/or dumping and/or landfilling has been conducted not in compliance with the requirements as meant in this government regulation, everyone or every business company generating, collecting, transporting, treating or landfilling B3 waste, either individually or jointly, will be obligated to undertake cleaning and/or recovery of the environment within a maximum period of 1 (one) year.
- (2) If people or business companies generating, collecting, transporting, treating and landfilling B3 waste as meant in sub article (1) fail to undertake environmental cleaning and recovery, a responsible government agency may undertake or ask a third party to undertake the environmental cleaning and recovery with the cost arising to be proportionally charged to the people or business companies generating, collecting, transporting, treating and landfilling B3 waste, either individually or jointly.
- (3) As for the activities utilizing B3 waste from abroad and already possessing a license, their import of B3 waste as a raw material can be conducted only up to September, 2002.

Article 65

Everyone or every business company already undertaking the activities of storing, collecting, utilizing, treating and landfilling at the time when this government comes into force will be obligated to ask for a license as meant in Article 40 at the latest within 1 (one) year as from the time when this government regulations comes into force.

CHAPTER VIII CLOSING PROVISIONS

Article 66

With the enforcement of this government regulation, Government Regulation No. 19/1994 on the management of the, waste of hazardous and toxic materials (Statute Book No. 26/1994, Supplement to Statute Book No. 3551) which has been amended by Government Regulation No. 12/1995 on the amendment to Government Regulation No. 19/1994 on the management of the waste of hazardous and toxic materials (Statute Book No. 24/1995, Supplement to Statute Book No. 3595) will be declared null and void and reference must be made to this government regulation.

Article 67

This government regulation will take effect as from the date of promulgation.

For public cognizance, this government regulation will be promulgated by publishing it in the Statute Book of the Republic of Indonesia.

Stipulated in Jakarta
On February 27, 1999
THE PRESIDENT OF THE
REPUBLIC OF INDONESIA

sgd.

BACHRUDDIN JUSUF HABIBIE

**ELUCIDATION ON GOVERNMENT REGULATION
NO. 18/1999**

CONCERNING

**THE MANAGEMENT OF THE WASTE OF HAZARDOUS AND
TOXIC MATERIALS**

GENERAL

Development activities are aimed at promoting the welfare of the people and are conducted through long-term development plans with the development in the industrial sector as the pillar.

This development in the industrial sector will, on the one hand, generates goods useful to people's welfare but will, on the other, also generate waste. The waste generated by industrial activities also includes the waste of hazardous and toxic materials (B3). B3 waste dumped directly into the environment may give rise to dangers to the environment and human health and the health of other living creatures. In view of this risk, it is necessary to make an effort to ensure that every industrial activity may generate a minimum of B3 waste and prevent the entry of B3 waste from outside the territory of Indonesia. Regarding the role of the Indonesian government in supervising the cross-border movement of B3 waste, it ratified the Basel Convention on July 12, 1993 in Presidential Decree No. 61/1993.

Hierarchy in the management of B3 waste is aimed to ensure that only a minimum of B3 waste will be generated in each production unit and efforts are even made to reach the zero level by trying to reduce the sources through material processing, material substitution, regulation of operational activities and the use of a clean technology. If, anyhow, B3 waste is still generated, efforts will be made to make use of this B3 waste.

The utilization of B3 waste, which encompasses recycling, recovery and reuse, constitutes an important chain in the management of B3 waste. The use of a B3 waste utilization technology will, on the one hand, reduce the quantity of B3 waste so that the cost of treating B3 waste can also be cut down and on the other it will also improve the benefit of raw materials. This, in its turn, will reduce the speed at which natural resources are depleted.

To remove or reduce the risk which may be entailed by B3 waste generated, B3 waste generated Must be specifically managed.

The management of B3 waste constitutes a series of activities encompassing storage, collection, utilization, transportation and treatment of B3 waste, including the landfilling of the outcome of the treatment. In this series of activities a number of parties are connected and each of them forms a link in the chain of B3 waste management, namely:

- a. the party generating B3 waste;
- b. the party collecting B3 waste;
- c. the party transporting B3 waste;
- d. the party utilizing B3 waste;
- e. the party treating B3 waste;
- f. the party landfilling B3 waste.

With the waste treatment as referred to above, the cyclical chain of the travel of B3 waste from the time it is generated by the party generating B3 waste up to the final landfilling by the party treating B3 waste may be supervised. Each link in the chain must be regulated while the travel of B3 waste must be controlled using a system of manifest, which is a B3 waste document. The manifest system makes it possible to find out the quantity of B3 waste generated and the quantity already put into the treatment and final landfilling process already fulfilling the requirements for the environment.

ARTICLE BY ARTICLE

Article 1

Figure (1)

Referred to as the residue in an activity will be the residue in an activity and/or production process, among others, is generated in household, hospital, industrial, mining and other activities.

Figure (2)

This waste of hazardous and toxic waste constitutes among others a raw material which is hazardous and toxic: in nature and not used because of being damaged/exceeding the expiration date, material/packing residue, spilling, process residue, used diesel oil, dirty diesel oil, waste from the activities of vessel and tanker cleaning, which will need specific handling and treatment. Not included in this category will be liquid waste which has the characteristics of B3 but which can be subject to supervision by a government regulation on the control over water contamination and dust and gas waste which has the characteristics of B3 waste but which can be overcome by a government regulation on the control over air pollution.

Figures (3) up to (15)
Sufficiently clear.

Figure (16)

The process in which the characteristics and composition of B3 waste changed will be carried out to ensure that the said waste become no longer hazardous and or toxic. This process can be conducted using an appropriated technology, such as stabilization and solidification, incineration or neutralization.

If this technology cannot be applied, use must be made of the best technology available to treat the said waste, such as the change of ions and membranes of cells and other technology conforming to the progress in knowledge and technology..

Figures (17) up to (20)

Sufficiently clear.

Article 2

Sufficiently clear.

Article 3

Referred to as dumping the B3 waste directly into the ground, water or air is the dumping of B3 waste without first being treated. This stipulation is aimed at ensuring that the B3 waste generated may be well m not be hazardous and/or toxic any more to human health and/or the environment.

Article 4

Referred to as dilution will be adding liquid or other substances to B3 waste so that the concentration of toxic substances and/or the level of hazard may be reduced with the contaminating load, however, remaining the same as that before the dilution. This is prohibited because dilution will not remove the hazardous ad toxic character of B3 waste.

Article 5

The management of radioactive waste will be conducted by the National Agency of Atomic Energy, which is a government agency responsible in the management of radioactive waste.

Article 6

The first step taken in the management of B3 waste is identifying whether the waste from a generating source belongs to the category of B3 waste or not.

This waste identification will facilitate parties generating, collecting, transporting, utilizing, treating or landfilling B3 waste in recognizing the said B3 waste as early as possible.

The identification of waste as B3 waste will be conducted in the following stages:

- a. matching the type of the waste with the list of types of B3 waste and if agreement is found with the list of types of B3 waste, the said waste will be categorized as B3 waste;
- b. if no agreement is found with the list of types of B3 waste, the waste will be examined to find out whether it has the following characteristics: explosive, inflammable or toxic or reactive or causing infection or corrosive;
- c. if these two stages have been passed and the provision on B3 waste fails to be fulfilled, the final test will be a toxicology test.

article 7

Sub-article (1)

B3 waste from a non-specific source is B3 waste which does not generally come from the main process, but from the activities of equipment maintenance, cleaning, corrosion inhibition, dissolution of rust, packing and so forth.

B3 waste from a specific source is B3 waste as residue from a process in an industrial undertaking or activity which specifically may be determined.

B3 waste from chemicals going beyond their expiration date, spilling, packing remainder or dumping of products not fulfilling certain specification will, because of not meeting the specification stipulated or not being able to be reused, become B3 waste which will need to be managed just like other B3 waste. The same thing also applies to the B3 waste packing remainder and chemicals which have gone beyond their expiration date.

Sub-articles (2) and (3)

Sufficiently clear.

Article 8

Sub-article (1)

Testing of waste characteristics is conducted before the waste is treated.

Referred to in this provision as:

- a. **explosive waste is waste which at standard temperature and pressure (25°C, 760 mm Hg) can explode or can, through a chemical and/or physical reaction, generate gas at high temperature and pressure which can swiftly damage the surrounding environment.**
- b. **inflammable waste is waste which has one of the following characteristics:**
 - 1) **liquid waste containing alcohol amounting to less than 24% of the volume and/or having a burning point of no higher than 60°C (140°F) will burn if it is exposed to fire, sparks of fire or other sources of ignition at 760 mm Hg of air pressure;**
 - 2) **non-liquid waste which at standard temperature and pressure (25°C, 760 mm Hg) can easily cause a fire through friction, vapor absorption or spontaneous chemical changes and which may cause continuous fire once it burns;**
 - 3) **constituting inflammable pressured waste;**
 - 4) **constituting waste which can easily turn into oxidant.**
- c. **Waste which is reactive in character is the waste which has one of the following characteristics:**
 - 1) **waste which in a normal situation is not stable and can cause changes without causing explosion;**
 - 2) **waste which can cause a reaction of great intensity in water;**
 - 3) **waste which, if it is mixed with water, will have a potential to cause explosion, generate toxic gas, vapor or smoke in a quantity of endangering human health and the environment;**
 - 4) **constituting cyanide, sulfide and ammonia waste which in a condition of the pH being between 2 and 12.5, may generate toxic, gas, vapor or smoke in a quantity endangering human health and the environment;**

- 5) waste which is inflammable or starts a reaction at standard temperature and pressure (25°C, 760 mm Hg);
 - 6) waste which may cause a fire because of releasing or receiving oxygen or unstable peroxide organic waste at a high temperature.
- d. toxic waste is waste containing pollutant which is toxic to human beings or the environment and may cause death or serious illnesses if it gets into the body orally or through respiration or the skin.

To determine toxicity in identifying this waste, one may use the TCLP (Toxicity Characteristic Leaching Procedure) concentration quality standard of organic and inorganic pollutants in waste as set forth in Attachment II to this government regulation.

If the waste contains one of the pollutants included in Attachment II, in the same or bigger concentration than the value set forth in the said Attachment II, the said waste will be B3 waste. If the threshold value of the pollutant is not found in the said Attachment II, a toxicology test will be conducted.

- e. waste which causes infection
Amputated parts of human body and liquid from infected parts of human body, the waste from a laboratory or other waste infected by the germs of contagious diseases. This waste is dangerous because it contains germs of diseases such as hepatitis and cholera which may be communicated to workers, road sweepers and the community around the waste dumping location.
- f. waste which is corrosive in nature is the waste which has one of the following characteristics:
- (1) causing irritation on the skin;
 - (2) causing a process of corrosion in a steel sheet (SAE 1020) with a corrosion rate bigger than 6.35 mm/year at testing temperature of 55° C;
 - (3) having pH which is the same or smaller than 2 for acid waste and the same or bigger than 12.5 for alkaline waste.

Sub-article (2)

A toxicology test to determine the value of LD50 (Lethal Dose Fifty). Referred to as LD50 is the calculation of the dose (gram of pollutant per kilogram) which may cause the death of 50% of the population of living creatures involved in the experiment. If LD50 is bigger than 15 gram per kilogram of body weight, the said waste is not B3 waste.

A toxicology test by bio-essay will be conducted for B3 waste which does not have a reference dose and/or B3 waste which is acute in nature. As for chronic B3 waste, a study will be conducted using the methodology of calculation and or based on the result of studies and the development of science as determined by the government agency responsible in the sector of environmental impact control.

If, after a toxicology test, the said waste is declared to be non-B3 waste, its management may be conducted on the basis of the provisions stipulated by the responsible government agency.

Article 9

Sub-articles (1) up to (4)

Sufficiently clear.

Sub-article (5)

In principle a party generating B3 waste remains responsible for the B3 waste generated.

Sub-article (6)

Sufficiently clear.

Article 10
Sub-articles (1) and (2)
Sufficiently clear.

Article 11
Sub-article (1)

The consequence of the principle that the traces of B3 waste will be required to make and keep records about the quantity and types of B3 waste generated and sent to the party collecting or treating B3 waste and to the transporting party undertaking the transportation of the waste. If the transportation is conducted by the parties generating the B3 waste themselves, the provision on the records of the name of the transporting party will not apply.

If the party generating B3 waste also utilizes, treats and landfills B3 waste, the party generating B3 waste must report to the relevant authority the treatment of the B3 waste.

Sub-article (2)

The purpose of submitting this report is to ensure that the quantity of B3 waste generated by a party generating B3 waste can be monitored by the responsible government agency.

As the quantity of B3 waste generated is known, the map on B3 sources, which will be the basis for the development of B3 waste management policies, may also be known.

Sub-article (3)
Sufficiently clear.

Article 12
Sufficiently clear.

Article 13
Sub-articles (1) up to (3)
Sufficiently clear.

Article 14
Sub-articles (1) and (2)
Sufficiently clear.

Article 15
Sub-articles (1) up to (3)
Sufficiently clear.

Article 16
Sub-article (1)
A B3 waste document is a letter given at the time when B3 waste is handed over by the party generating B3 waste or the party collecting B3 waste to the party transporting B3 waste. A B3 waste document contains the following provisions:

- a. the name and the address of the party generating or collecting B3 waste that hands over B3 waste;
- b. the date on which B3 waste is handed over;
- c. the name and the address of the party transporting B3 waste;
- d. the destination of the transportation of B3 waste;
- e. the type, quantity, composition and characteristics of B3 waste handed over.

A B3 waste document is made in 7 (seven) folds if the transportation is conducted only once and if the transportation is conducted more than once (inter-mode transportation), the document will be made in 11 (eleven) fold with the details being as follows:

- a. the original (first) sheet is kept by the party transporting B3 waste after it is signed by the party generating B3 waste;
- b. the second sheet, which has been signed by the party transporting B3 waste, will be dispatched by the party sending B3 waste to a responsible government agency;
- c. the third sheet, which has been signed by the transporting party, will be kept by the party sending B3 waste;
- d. the fourth sheet, having been signed by the party sending B3 waste, will be dispatched to the party receiving B3 waste;
- e. the fifth sheet is sent by a recipient party to the responsible government agency after it has been signed by the party receiving B3 waste;
- f. the sixth sheet is sent by a transporting party to the regent/municipality head/head of a second-level region concerned through a courier service after it has been signed by the party receiving B3 waste;
- g. the seventh sheet, having been signed by the recipient party, will be sent to the party sending B3 waste by the transporter;
- h. the eighth up to eleventh sheets will be sent by the transporting party to the party sending B3 waste after they have been signed by an earlier transporting party and handed over to the next transporting party (inter-mode transportation).

Sub-article (2)

Sufficiently clear.

Articles 17 and 18

Sufficiently clear.

Article 19

Sub-articles (1) up to (2)

Sufficiently clear.

Sub-article (3)
Sufficiently clear.

Articles 20 and 21
Sufficiently clear.

Article 22
Sub-articles (1) and (2)
Sufficiently clear.

Article 23
Sub-articles (1) up to (3)
Sufficiently clear.

Article 24
Sub-articles (1) and (2)

Article 25
Sub-articles (1)
Sufficiently clear.

Sub-article(2)
Sufficiently clear

Article 26
Sub-articles (1) up to (3)
Sufficiently clear.

Article 27
Sub-articles (1) and (2)
Sufficiently clear.

Article 28
Sub-article (1)
Referred to as packing is the place/container for the storage, transportation and collection of B3 waste. A symbol is a picture stating the characteristics of B3 waste. A label is inscription indicating among other things the characteristics and types of B3 waste.

Sub-article (2)
Sufficiently clear.

Article 29
Sub-article (1)
Sufficiently clear.

Sub-article (2)
Referred to as place for storage which meets the requirements is a separate place designed in accordance with the characteristics of B3 waste to be stored. Reactive B3 waste (strong reductor), for example, cannot be mixed with oxidant mineral acid because it may generate heat, toxic gas and fire.

A temporary place for storage must be able to accommodate the quantity of B3 waste to be stored temporarily. An industrial activity generating B3 waste, for example, entails the storage of B3 waste in a temporary place for storage whose capacity conforms to the capacity of B3 waste to be stored and which fulfills the technical, health and environmental protection requirements.

Sub-article (3)
Sufficiently clear.

Article 30
Sub-articles (1) and (2)
Sufficiently clear.

Articles 31 and 32
Sufficiently clear.

Article 33
Sub-articles (1) and (2)
Sufficiently clear.

Article 34
Sub-articles (1) up to (3)
Sufficiently clear.

Sub-article (4)
Sufficiently clear

Sub-article (5)
Referred to as B3 destruction and removal efficiency is "the Destruction Removal efficiency (DRE)". The determination on the air emission standard nation of the air emission standard is based on the emission standard of the laws applied to the conventional parameters (CO, NO, Hydrocarbon SO₂, TSP Ammonia). As for the determination of other emission standards, they will be based on the characteristics of B3 waste, the type of the incinerator, the local air quality and others in accordance with the development of science and technology.

Sub-article (6)
Sufficiently clear.

Article 35
Referred to as the agreement to terminate treatment is the termination of operation (closure of treatment) after it is known that the said location is not contaminated.

Article 36
For the types of B3 waste whose LD50 is bigger than 50 mg/kg of body weight, landfilling may be conducted at a location with the maximum soil permeability being 10 to the power of negative 5 cm per second.

If on the basis of the spatial layout design plan the designation of the location for B3 waste landfilling is yet to be determined, the government responsible may propose it to the Minister.

Article 37
Sub-article (1)
Landfilling in this provision constitutes a series of treatment activities. Landfilling of the outcome of the treatment of B3 waste is the act of dumping by means of landfilling where the landfill is designed as the final stage of the treatment of B3 waste in accordance with the characteristics of the said B3 waste.
A protective layer is the layer established to prevent the exposure of B3 waste or alkaline water from B3 waste to the environment. A protective layer may be in the form of a *synthetic liner* or *compacted clay* or other equal layers with the same permeability.

Protective lining may be given by means of *double liner* and or one *liner* or by only *compacted clay* in accordance with the standard for B3 waste landfilling stipulated by the responsible agency.

Sub-article (2)
Sufficiently clear.

Article 39

Referred to as the agreement to terminate landfilling is the termination of the operation (closure of landfilling) after it is known that the said location is not contaminated.

Article 39

Sub-article (1)

Referred to as the location for terminated B3 waste landfilling activity is the location formerly used for land filling (post closure)

Referred to as other public facilities are sports, educational, hospital, recreational and other facilities.

Sub-article (2)
Sufficiently clear.

Article 40

Sub-articles (1) and (2)

Sufficiently clear.

Sub-article (3)

Referred to as being integrated is the condition in which an activity of treatment is conducted at the same place as the place where the main business activity is conducted.

Referred to as a license for the operation of B3 treatment instruments is a license about the worthiness of the operation of B3 treatment instruments, for example the worthiness of the incinerator, which includes among other things the incineration efficiency of 99.99% and the use of an air pollution control device.

Sub-articles (4) and (5)
Sufficiently clear.

Article 41

Sub-article (1)

The announcement will be made in a place where it will be easily known and in a language which will be easy for the community to understand.

Sub-article (2)

Sufficiently clear.

Article 42

Sub-article (1)

The location for the treatment and landfilling of B3 waste must be determined in accordance with the regional spatial layout design and technical requirements.

Sub article (2)

Sufficiently clear.

Article 43

Sub-article (1)

In the case of small-scale collection with respect to, for example, used lubricant, filthy oil and slop oil, while an analysis on the impacts on the environment is not compulsory, environmental monitoring efforts and environmental management efforts must be made

Sub-articles (2) and (3)

Sufficiently clear.

Article 44

Sub-articles (1)

Sufficiently clear.

Sub-article (2)
Sufficiently clear

Article 45
Sub-articles (1) up to (4)
Sufficiently clear.

Article 46
Sub-articles (1) up to (3)
Sufficiently clear.

Sub-article (4)
The requirements and obligation set forth in the environmental management plan and the environmental monitoring plan constitute an inseparable part of the license.

Article 47
Sub-articles (1) up to (4)
Sufficiently clear.

Article 48

Sub-article (1)

The identification card and the letter of assignment are important to avoid the presence of false officers or to ensure that not every employee of the government responsible in the environmental control area may exercise supervision which is actually not part of their authority.

The identification card will contain the name, the civil service registration number and the photograph. The letter of assignment must clearly state the name of the supervisor assigned to exercise supervision.

Sub-article (2)

Sufficiently clear.

Article 49

Sufficiently clear.

Article 50

The said supervisor is the supervising officer appointed as a civilian civil servant investigator in environmental matters.

Article 51

Sub-articles (1) and (2)

Sufficiently clear.

Article 52

Sub-article (1)

The said health test will be conducted at least once a year with a view to finding out as early as possible the contamination of workers by chemical substance/compound from the B3 waste.

Sub-articles (2) and (3)

Sufficiently clear.

Article 53

Sub-article (1)

Waste under the codes of D220, D221, D222 and D223 are included in the list of waste which it is prohibited to import to the territory of the Republic of Indonesia.

This prohibition is caused by among other things the limited laboratory facilities and infrastructure to undertake the identification of B3 waste in the context of supervision over the import of waste and the limited technology and capacity of waste management in Indonesia.

Sub-articles (2) and (3)

Sufficiently clear.

Sub-article (4)

The export of B3 waste can be conducted only if there is a written agreement from authorized government agency or officials in B3 waste matters in the recipient country and the said recipient country must have proper facilities for the management and/or utilization of B3 waste so that the management of the said B3 waste will not give rise to B3 waste must comply with Articles 6, 7 and 8 of this government regulation and the list of B3 waste stipulated by the Basel Convention.

Sub-article (5)

Sufficiently clear.

Article 54

Sub-articles (1) and (2)

Sufficiently clear.

Article 55

Sub-articles (1) up to (3)

Article 56

Sub-articles (1) and (2)

Sufficiently clear.

Article 57

Sufficiently clear.

Article 58

Sub-article (1)

Referred to as an accident in this sub-article is the release of spilling of hazardous and toxic materials and/or B3 waste into the environment which must be quickly and appropriately handled to prevent the spread of the impact cause by the said spilling of B3 waste so that the spread of contamination of and/or damage to the environment and the disturbance of human health may be prevented.

B3 management in this respect needs prevention and management efforts both during and after the accident. These efforts must be made quickly and appropriately and on a coordinated and integrated manner by relevant inter-sectoral government agencies.

Sub-article (2)

This information is meant to be used by the community in an effort to save themselves in case of an accident and in participation in managing the accident.

Referred to as a system of emergency response if a system of controlling an emergency which will encompass the prevention and management of an accident as well as the restoration of the quality of the environment.

Sub-article (3)

Sufficiently clear.

Sub-article (4)

B3 spilling into the environment will be categorized as B3 waste.

Sub-article (5)
Sufficiently clear.

Article 59
Sub-article (1)
Sufficiently clear.

Sub-article (2)
Referred to as being unmanageable is a condition in which no facilities, infrastructures and experts are available to supervise the management of an accident and the extent of the damage has gone over the borders of second-level regions.

Sub-article (3)
Sufficiently clear.

Sub-article (4)
Referred to as a massive impact is a condition in which the extent of the impact of the accident in the management of B3 waste goes over the borders of second-level regions and/or first-level regions and/or states.

Article 60
Sub-article (1)
What is referred to as environmental contamination or damage caused by an activity may take the form of non-deliberate contamination or damage such as, among others, management or landfilling not conforming to the environmental requirements and/or non-deliberate activities such as, among others, the release of chemicals into the environment as a result of a leaked tanker or as a result of a traffic accident.

Sub-article (2)
Sufficiently clear.

Article 61
Sub-article (1)
Sufficiently clear.

Sub-article (2)
The said technical feasibility study is intended for, among other things, to find out the financing of sample collection, laboratory analysis, technical worthiness inspection and publication.

Sub-articles (3) and (4)
Sufficiently clear.

Article 62
Sub-articles (1) up to (4)
Sufficiently clear.

Article 63
Sufficiently clear.

Article 64
Sub-article (1)
Referred to as proportionally sharing the responsibility is that each will assume the responsibility in accordance with their contribution to the environmental contamination or damaged caused. Cleaning and restoration of the environment in this article will encompass among others studies to find out the extent of the impact, the types, the quantity and the concentration of the existing waste as a basis for environmental cleaning and restoration as well as the management of B3 waste already dumped into the environment.

sub-article (2)
Sufficiently clear.

Sub-article (3)

Facts show that at present there are industrial undertakings still using B3 waste as their raw materials, namely the lead-smelting industries. The said raw materials are domestically obtained while their imports are intended to make up for the short supply.

The imports of B3 waste can be conducted only until September 2002 and such imports from OECD countries/advanced countries will be prohibited. Such imports can be conducted only by importer producers.

Before the imports are undertaken, the exporting countries must first notify the head of the responsible government agency and obtain the approval from the head of the responsible government agency.

This means that at a stipulated time the utilization of B3 waste will use only raw materials that are domestically obtained.

Articles 65 up to 67

Sufficiently clear.