

GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA
No. 27/2002

ON
RADIOACTIVE WASTE

THE PRESIDENT OF THE REPUBLIC OF INDONESIA,

Considering :

that in order to enforce the provisions of Article 27 paragraph (2) of Law No. 10/1997 on nuclear power, it is necessary to stipulate a government regulation regarding radioactive waste management.

In view of :

1. Article 5 paragraph (2) of the 1945 Constitution, which has been amended by the third amendment to the 1945 Constitution;
2. Law No. 10/1997 on nuclear power (Statute Book 1997 No. 23, Supplement to Statute Book No. 3676);
3. Law No. 23/1997 on environmental management (Statute Book 1997 No. 68, Supplement to Statute book No. 3699);
4. Government regulation No. 63/2000 on health and safety regarding utilization of ionising radiation (Statute book 2000 No. 136, Supplement to Statute Book No. 3992);
5. Government regulation No. 64/2000 on permit to utilize nuclear power (Statute Book 2000 No. 137, Supplement to Statute Book No. 3993).

DECIDES :

To stipulate :

THE GOVERNMENT REGULATION ON RADIOACTIVE WASTE.

CHAPTER I
GENERAL PROVISIONS

Article 1

1. Radioactive waste is radioactive substance and/or materials and equipment, which have been touched by radioactive substance or become radioactive due to the operations of nuclear installations or installations utilizing ionising radiation that cannot be used anymore.
2. Low-level radioactive waste is radioactive waste, which has an activity above clearance level but under medium level and does not require any radiation supporters during handling process in normal condition and during transportation.
3. Medium-level radioactive waste is radioactive waste, which has an activity above low level but under the high level, does not require any coolers, but requires

radiation supporters during handling in normal condition and during transportation.

4. High-level radioactive waste is radioactive waste, which has an activity above the medium level, requires coolers and radiation supporters during handling in normal condition and during transportation. It includes used nuclear fuel;
5. Safety level is a value designated by the watchdog and declared in the concentration of activity or contamination level, and/or total activity on or under the said value, and the source of radiation shall be freed from being supervised;
6. Radioactive waste producer is holder of a permit, which, due to its activity, produces radioactive waste;
7. Radioactive waste manager is the implementing entity or state-owned enterprise, cooperatives, and/or private enterprise, which cooperates with or is appointed by the implementing agency, and manage radioactive waste;
8. Radioactive waste management is collecting, classifying, processing, transporting, storing, and/or removing of radioactive waste;
9. Radioactive waste manager is producer of radioactive waste or the implementing agency or state-owned enterprise, cooperatives, and/or private agency cooperating with or being appointed by the implementing agency; and they manage radioactive waste;
10. Processing of radioactive waste is the process to change the characteristics and composition of radioactive waste so that it will not endanger the public and the environment when stored and/or removed;
11. Environmental management is an integrated effort to preserve the function of environment, which includes arrangement, utilization, development, maintenance, recovery, supervision, and environmental control policies;
12. Temporary storage is the storage of radioactive waste before the final storage;
13. Storage is the final storage of low and medium-level radioactive waste;
14. Permanent Storage is the final storage of high-level radioactive waste;
15. Installations decommissioning is an activity to cease the operations of nuclear installations or installations using radioactive substance, which is, among other things, done by removing the radioactive substance, uncovering installations components, decontaminating, and final securing;
16. Implementing agency is an agency, which has the duty to utilize nuclear power;
17. Watchdog is an agency having the duty to control any utilization of the nuclear power;

CHAPTER II SCOPE, PRINCIPLES, AND PURPOSE

Article 2

This regulation rules about classifications of radioactive substance, the management of permits, processing, transportation, and storage of radioactive waste, quality guarantee program, environmental management and monitoring, management of radioactive waste of nuclear excavated materials mines, and other mines,

decommissioning program, and the prevention of accidents caused by nuclear and/or radiation.

Article 3

The radioactive waste management must comply with the principle of protection from radiation, which comprises of justifications, limitations, and optimisations principles.

Article 4

The radioactive waste management has the purpose to protect health and safety of the workers, the public, and the environment from the danger of radiation and/ or contamination.

CHAPTER III CLASSIFICATION OF RADIOACTIVE WASTE

Article 5

- (1) Radioactive waste shall be classified into low, medium, and high-level radioactive waste.
- (2) The classification of radioactive waste, as set forth in paragraph (1), shall be further set forth under decision of chairman of the watchdog.

Article 6

Radioactive waste, which has been classified in Article 5, must be grouped based on quantity and characteristics of the radioactive substances, which consist of :

- a. Activity;
- b. Part time;
- c. Type of radiation;
- d. Physical and chemical forms;
- e. Poison characteristics;
- f. Origin of the radioactive waste.

CHAPTER IV THE MANAGEMENT OF PERMIT

Part One Permit

Article 7

- (1) Any individual or corporation who will utilize the nuclear power must inform the watchdog that the radioactive waste will be returned to the country of origin or delivered to the implementing agency to be managed by them.
- (2) Return of the waste to the country of origin, as set forth in paragraph (1), must obtain the approval of the watchdog.

- (3) The watchdog shall issue their approval, as set forth in paragraph (2), within thirty (30) days.
- (4) Evidence of the return, as set forth in paragraph (2), must be delivered to the watchdog not later than fourteen (14) days after delivery.
- (5) In case the radioactive waste will be managed by the implementing agency, as set forth in paragraph (1), the watchdog shall inform this matter to the implementing agency.

Article 8

- (1) The implementing agency or state-owned enterprise, cooperatives, and/or private enterprise managing radioactive waste, must obtain permit from the watchdog.
- (2) The permit issued for state-owned enterprises, cooperatives, and/or private enterprises, as set forth in paragraph (1), shall be granted after there is an evidence of cooperation of or appointment by the implementing agency.

Article 9

The establishment and operation of collections, groupings, or processing and temporary storage facilities of radioactive waste as a result of mining of nuclear and non-nuclear excavated materials, must obtain a permit from the watchdog.

Article 10

- (1) The establishment and operations of radioactive waste preservation storage must obtain the approval of the watchdog.
- (2) The permit, as set forth in paragraph (1), includes building-site permit, constructions, and operational permits.

Part Two Responsibilities of the Implementing Agency

Article 11

The implementing agency shall be responsible for :

- a. The arrangement and designation of procedures and technical guides to the management of radioactive waste;
- b. The management of radioactive waste, which is derived from technical nuclear applications and other waste producers, to be processed, temporarily stored, or permanently stored;
- c. The provision of storing places for low and medium level radioactive waste and permanent storing places for high-level radioactive waste; and
- d. The technical development on the management of radioactive waste on radioactive waste managers and producers.

Part Three Responsibility of Radioactive Waste Producers

Article 12

Radioactive waste producers must cause the volume and activity of radioactive waste to become as low as possible, through design, development, operations, and decommissioning of accurate installations.

Article 13

- (1) Producers of low and medium-level radioactive waste must collect, group, or process and temporarily store radioactive waste before being delivered to the implementing agency.
- (2) The radioactive waste, as set forth in paragraph (1), can directly be released into the environment if it has reached the level of safety.
- (3) Limit of the safety level, as set forth in paragraph (2), will be set forth under a decision issued by the implementing agency.

Article 14

- (1) Radioactive waste producers must provide accommodating places in accordance with the volume and characteristics of the radioactive waste.
- (2) The accommodating places, as set forth in paragraph (1), will be set forth under a decision issued by the watchdog.

Article 15

Producers of radioactive waste must have equipment used to detect radioactive waste.

Article 16

- (1) Producers of low and medium-level radioactive waste must prepare and keep records, which contain of, at least :
 - a. Quantity;
 - b. Characteristics; and
 - c. The length of time required for producing radioactive waste.
- (2) Duplicate of the records, as set forth in paragraph (1), must be furnished to the watchdog at least once (1) in every six (6) months.

Article 17

- (1) Producers of high-level radioactive waste must prepare and keep records on radioactive waste, which, at least, contains of :
 - a. Quantity;
 - b. Characteristics;
 - c. Identification number;
 - d. Radio nuclide contained in the high-level radioactive waste;
 - e. The time of production of radioactive waste.
- (2) Producers of used nuclear fuel must have a system of responsibility and control of nuclear materials, physical protections system, and must prepare records on

enrichment and burn-up fraction, other than the records set forth in paragraph (1).

(3) Duplicates of the records, as set forth in paragraphs (1) and (2) must be furnished to the watchdog at least once (1) in every six (6) months.

Part Four Radioactive Waste From Abroad

Article 18

- (1) Radioactive waste imported from abroad shall not be permitted to be stored in the legal territory of the Republic of Indonesia.
- (2) The provision of paragraph (1) shall not be applicable for radioactive waste, which is as a result of radioactive substance produced locally.
- (3) The radioactive waste, as set forth in paragraph (2), may only be stored in Indonesia after being evidenced by a document indicating that the said radioactive substance is originated and produced in Indonesia.

Part Five Used Nuclear Fuel

Article 19

- (1) Used nuclear fuel shall not be processed by radioactive waste producers.
- (2) The used nuclear fuel, as set forth in paragraph (1), must be stored temporarily, at least, during the operations of nuclear reactors.
- (3) After the temporary storage, as set forth in paragraph (2), the used nuclear fuel must be delivered to the implementing agency for permanent storage or must be returned to the country of origin.

Article 20

- (1) The temporary storing places of the used nuclear fuel must comply with, at least, the following conditions :
 - a. The locations must be flood-free;
 - b. Quake-resistant;
 - c. Designed appropriately so that they will not suffer from any critical conditions;
 - d. Completed with radiation protections equipment;
 - e. Completed with cooling system;
 - f. Completed with radiation supporter;
 - g. Completed with physical protections system; and
 - h. Completed with radiation control system.
- (2) The conditions set forth in paragraph (1) will be further ruled under a decision of the watchdog.

CHAPTER V

PROCESSING, TRANSPORTATION, AND STORAGE OF RADIOACTIVE WASTE

Part One Processing of Radioactive Waste

Article 21

- (1) Processing of low and medium-level radioactive waste can be done by the producers of radioactive waste, alone.
- (2) Radioactive waste, which has been processed, as set forth in paragraph (1), must be delivered to the implementing agency.
- (3) Producers of low and medium-level radioactive waste, which do not process the waste by the must deliver the radioactive waste to radioactive waste processors, i.e. :
 - a. The implementing agency; or
 - b. State-owned enterprises, cooperatives, and/or private enterprises cooperating with or appointed by the implementing agency.
- (4) The delivery of radioactive waste, as set forth in paragraphs (2) and (3), must be completed with a certificate of delivery & acceptance containing :
 - a. Quantity and characteristics of radioactive waste; and
 - b. Time of delivery of radioactive waste.
- (5) Duplicate of the certificate of delivery & acceptance, as set forth in paragraph (4), must be furnished to the watchdog, by radioactive waste producers, with regard to the provisions of paragraph (2) and paragraph (3) clause a, and by radioactive waste processors (with regard to paragraph (3) clause b.

Article 22

- (1) High-level radioactive waste, which is not classified as non-used nuclear fuel shall not be processed by the radioactive waste producers.
- (2) The radioactive waste, as set forth in paragraph (1), must be temporarily stored by the radioactive waste producers.
- (3) After the temporary storage, as set forth in paragraph (2), the high-level radioactive waste must be delivered to the implementing agency or must be returned to the country of origin.
- (4) The delivery of radioactive waste to the implementing agency, as set forth in paragraph (3), must be completed with a certificate of delivery & acceptance containing :
 - a. Quantity and characteristics of the radioactive waste; and
 - b. Time of delivery.
- (5) Return of the radioactive waste to the country of origin, as set forth in paragraph (3), must be completed with an evidence of delivery and records containing :
 - a. Quantity and characteristics of the radioactive waste; and

b. Time of delivery.

- (6) Duplicate of the certificate of delivery & acceptance, as set forth in paragraph (4), duplicates of evidence of delivery and the records, as set forth in paragraph (5), must be submitted to the watchdog, by the waste producers.

Article 23

The length of time for the delivery of duplicate of the certificate of delivery & acceptance, as set forth in Article 21 paragraph (5) and Article 22 paragraph (6), shall not be later than fourteen (14) days from delivery or return of the radioactive waste.

Article 24

- (1) Radioactive waste processors must comply with, at least, the following conditions :
- a. Have a program and perform environmental management and control periodically;
 - b. Have to perform a comprehensive analysis on radioactive waste, in order to decide accurate processing method;
 - c. Have protections system to control the level of radiation and contamination;
 - d. Use processing units in accordance with processing methods; and
 - e. Have a temporary accommodating place for radioactive waste.
- (2) The conditions set forth in paragraph (1) will be further set forth under a decision issued by the watchdog.

Part Two Transportation of Radioactive Waste

Article 25

Transportation of radioactive waste must comply with the conditions for radioactive substance transportation and transportation rules, in general.

Part Three Storage of Radioactive Waste

Article 26

- (1) Temporary storing places of low and medium -level radioactive waste must comply with, at least, the following conditions :
- a. The locations must be flood-free;
 - b. Quake-resistant;
 - c. Design of the buildings must be adjusted to the quantity and characteristics of waste, and there must be efforts to prevent from pollution;
 - d. Completed with radiation protections equipment; and
 - e. Shall be monitored periodically.
- (2) The temporary storing places of high-level radioactive waste must comply with additional conditions, i.e., there should at least be cooling system and radiation

supporter, other than the conditions set forth in paragraph (1).

(3) The conditions set forth in paragraphs (1) and (2) will be further set forth under a decision of the watchdog.

Article 27

(1) The storage of low and medium-level radioactive waste may only be done by the implementing agency.

(2) The storing places of radioactive waste, as set forth in paragraph (1), must comply with, at least, the following conditions :

- a. The locations must be flood-free and away from erosion;
- b. The locations must be quake-resistant and comply with the characteristics of earth materials and chemical characteristics of water;
- c. Completed with radiation monitoring system and environmental radioactivity;
- d. Completed with cooling system;
- e. Completed with radiation supporters;
- f. Completed with physical protections system;
- g. Comply with populations distribution and regional arrangement of the storing locations; and
- h. Consider rate of external radiation.

(3) The conditions set forth in paragraph (2) will be further stipulated under a decision of chairman of the watchdog.

Article 28

(1) Permanent storage of high-level radioactive waste may only be done by the implementing agency.

(2) Permanent storing places of radioactive waste, as set forth in paragraph (1), must comply with, at least, the following conditions :

- a. The locations must be flood-free and away from erosion;
- b. The locations must be quake-resistant and comply with the characteristics of earth materials and chemical characteristics of water;
- c. They are designed appropriately to prevent them from any critical conditions;
- d. Completed with radiation monitoring system and environmental radioactivity;
- e. Completed with cooling system;
- f. Completed with radiation supporters;
- g. Completed with physical protections system;
- h. Comply with population distribution and territorial arrangement around the storing places.

(3) The conditions set forth in paragraph (2) will be further stipulated under decision of chairman of the watchdog.

CHAPTER VI

QUALITY GUARANTEE PROGRAM

Article 29

- (1) Before processing radioactive waste, the radioactive waste processors must arrange a quality guarantee program for design, development, operational, maintenance, installations decommissioning, and radioactive waste management activities.
- (2) The quality guarantee program, which has been arranged by the radioactive waste processors, as set forth in paragraph (1), shall be forwarded to the watchdog for approval.
- (3) The quality guarantee program, which has obtained the approval, as set forth in paragraph (2), must be implemented by radioactive waste processors.

CHAPTER VII ENVIRONMENTAL MANAGEMENT AND CONTROL

Article 30

- (1) Radioactive waste processors must monitor the level of radiation and environmental radioactivity around the installations.
- (2) The implementing agency must perform management and monitoring of the area around temporary and permanent storing places of radioactive waste.
- (3) Results of the monitoring, as set forth in paragraphs (1) and (2) must be recorded and reported to the watchdog at least once (1) in every six (6) months.

CHAPTER VIII MANAGEMENT OF RADIOACTIVE WASTE OF NUCLEAR EXCAVATED MATERIALS MINES AND OTHER MINES

Article 31

- (1) The implementing agency or the agency mining nuclear excavated materials, must collect, group, or process and temporarily store radioactive waste.
- (2) Procedures for the collection, grouping, or processing and temporary storage of radioactive waste, as set forth in paragraph (1), will be further stipulated under a decision of chairman of the watchdog.

Article 32

- (1) Any individual or enterprise, which mine non nuclear excavated materials that may produce radioactive waste, must conduct a radiation safety analysis.
- (2) Result of the analysis, as set forth in paragraph (1), must be submitted to the watchdog.
- (3) Procedures of the analysis set forth in paragraph (1) will be further stipulated under a decision of chairman of the watchdog.

CHAPTER IX DECOMMISSIONING PROGRAM

Article 33

- (1) Before decommissioning the radioactive waste processing installations, radioactive waste processors must submit a decommissioning program document to the watchdog.
- (2) Procedures for the arrangement of the program document and implementation of the decommissioning, as set forth in paragraph (1), will be further set forth under a decision of chairman of the watchdog.

Article 34

The radioactive waste, which is as a result of decommissioning of nuclear installations and installations utilizing radioactive substance, must be delivered to the implementing agency.

CHAPTER X PREVENTION OF ACCIDENTS CAUSED BY NUCLEAR AND/OR RADIATION

Article 35

- (1) Producers, processors, and managers of radioactive waste must prevent the occurrence of accidents caused by nuclear and/or radiation.
- (2) In case of accidents caused by nuclear and/or radiation, the producers, processors, and managers of radioactive waste must take preventive actions in accordance with applicable rules.
- (3) The preventive actions, as set forth in paragraph (2), must be reported to the watchdog not later than thirty(30) days after the accidents.

CHAPTER XI ADMINISTRATIVE SANCTIONS

Article 36

- (1) The watchdog will give written reminders to the producers, processor, and/or managers of radioactive waste, should they violate the provisions of Article 7 paragraph (4), Article 14 paragraph (1), Article 15, 16, 17, Article 19 paragraphs (1) and (3), Article 21 paragraphs (2) - (5), Article 22 paragraphs (1), (3) - (6), Article 24 paragraph (1), Article 25, 29, 30, Article 31 paragraph (1), Article 33 paragraph (1), Article 34 and 35 of this regulation.
- (2) The written reminder, as set forth in paragraph (1), shall be issued within fourteen (14) days from the issuance of reminder.
- (3) If the reminder, as set forth in paragraph (2), is not complied with, a final reminder will be issued within fourteen (14) days from the expiration of the first reminder.
- (4) If the written reminder, as set forth in paragraph (3), is still not complied with, the

watchdog may freeze the business permit within thirty (30) days from the issuance of the freezing order.

- (5) If the producers, processors, and/or managers of radioactive waste do not comply with the reminder regarding freeze of business permit, as set forth in paragraph (4), the watchdog may revoke the permit.

Article 37

- (1) The watchdog may directly freeze the permit to utilize nuclear power if the management of radioactive waste violates the provisions of Article 11, Article 14 paragraph (1), Article 19 paragraphs (1) and (3), and Article 25, which may result in radiation endangering workers, the public, and the environment.
- (2) If, within thirty (30) days from freeze of business permit, the producers, processors, and/or managers of radioactive waste do not comply with the provisions regarding the reasons of freeze of permit, as set forth in paragraph (1), the watchdog may revoke the permit.

CHAPTER XII CRIMINAL PROVISIONS

Article 38

- (1) Violations against the provisions of Article 8 paragraph (1), Article 9, 10, and 18, shall be subject to criminal punishment set forth in Article 43 of Law No. 10/1997 on nuclear power.
- (2) Violations against the provisions of Article 13 paragraph (1), Article 19 paragraph (2), and Article 22 paragraph (2), shall be subject to the criminal punishment set forth in Article 44 of Law No. 10/1997 on nuclear power.

CHAPTER XIII CLOSING PROVISIONS

Article 39

With the effectiveness of this regulation, all enforcing regulations subordinate to this government regulation, which rule about the management of radioactive waste, as long as they are not in violation with or have not been amended by new regulations based on this government regulation, shall still be applicable.

Article 40

This regulation comes into full force and effect from the date of enactment.

For public cognizance, this presidential decree shall be promulgated by placing it in Statute Book of the Republic of Indonesia.

Stipulated in Jakarta
On May 13, 2002

THE PRESIDENT OF THE REPUBLIC OF INDONESIA
sgd
MEGAWATI SOEKARNOPUTRI

Promulgated in Jakarta
On May 13, 2002

THE SECRETARY OF STATE OF THE REPUBLIC OF INDONESIA
sgd
BAMBANG KESOWO

[Elucidation](#)

on Government Regulation No. 27/2002
Concerning Radioactive Waste Management
