



PRESIDEN
REPUBLIK INDONESIA

GOVERNMENT REGULATIONS OF THE REPUBLIC OF INDONESIA

NUMBER 61 OF 2013

ABOUT

RADIOACTIVE WASTE MANAGEMENT

BY THE GRACE OF GOD ALMIGHTY

PRESIDENT OF THE REPUBLIC OF INDONESIA,

Considering: a. that Radioactive Waste originating from the use of nuclear energy has the potential to endanger the safety, security and health of workers, the community and the environment if it is not managed appropriately and effectively using accurate methods and methods that are in accordance with developments in science and technology;

b. that for more comprehensive regulation regarding Radioactive Waste Management it is necessary to regulate it in a separate Government Regulation which replaces Government Regulation Number 27 of 2002 concerning Radioactive Waste Management;

c. that based on the considerations as intended in letters a and b and to implement the provisions of Article 27 paragraph (2) of Law Number 10 of 1997 concerning Nuclear Energy, it is necessary to establish a Government Regulation concerning Radioactive Waste Management;

Bearing in mind: 1. Article 5 paragraph (2) of the 1945 Constitution of the Republic of Indonesia;

2. Law Number 10 of 1997 concerning Nuclear Energy (State Gazette of the Republic of Indonesia of 1997 Number 23, Supplement to State Gazette of the Republic of Indonesia Number 3676);

DECIDE ...



PRESIDEN
REPUBLIK INDONESIA

- 2 -

DECIDE:

Establish: GOVERNMENT REGULATIONS CONCERNING RADIOACTIVE WASTE MANAGEMENT.

PIG

GENERAL REQUIREMENTS

article 1

In this Government Regulation what is meant by:

1. Radioactive Waste Management is the collection, grouping, processing, transportation, storage and/or disposal of Radioactive Waste.
2. Radioactive waste is radioactive substances and materials and equipment that have been exposed to radioactive substances or become radioactive due to the operation of nuclear installations and cannot be used any more.
3. Spent Nuclear Fuel is irradiated nuclear fuel that is removed from the reactor core permanently and is no longer used in its current condition due to depletion of fissile material, increased toxicity, or damage due to radiation.
4. The National Nuclear Energy Agency, hereinafter referred to as BATAN, is the implementing agency as intended in Law Number 10 of 1997 concerning Nuclear Energy.
5. The Nuclear Energy Supervisory Agency, hereinafter referred to as BAPETEN, is the supervisory agency as intended in Law Number 10 of 1997 concerning Nuclear Energy.
6. Radioactive Waste Producer is the holder of a permit for the utilization of ionizing radiation sources or nuclear materials and/or a permit for the construction, operation and decommissioning of nuclear installations whose activities produce Radioactive Waste.

7. Clients...



PRESIDEN
REPUBLIK INDONESIA

- 3 -

7. Clearance is the release of open radioactive substances, Radioactive Waste, or contaminated and/or activated materials and equipment from supervision.
8. Clearance level is the value of activity concentration and/or total activity of single or mixed radionuclides determined by BAPETEN, which if the activity concentration and/or total activity of radionuclides is below this value, the radionuclide can be exempted from supervision.

Section 2

- (1) Radioactive Waste is classified into types:
 - a. Low level Radioactive Waste;
 - b. Medium level Radioactive Waste; And
 - c. High level Radioactive Waste.
- (2) Low level and medium level Radioactive Waste as referred to in paragraph (1) letters a and b are in the form of:
 - a. unused encapsulated radioactive substances;
 - b. unused open radioactive substances; or c. unused contaminated and/or activated materials and equipment.
- (3) High level Radioactive Waste as referred to in paragraph (1) letter c is in the form of Used Nuclear Fuel.

CHAPTER II

IMPLEMENTING RADIOACTIVE WASTE MANAGEMENT

Article 3

- (1) Radioactive Waste Management as intended in Article 2 is carried out by Radioactive Waste Producers and BATAN.

(2) In...



PRESIDEN
REPUBLIK INDONESIA

- 4 -

- (2) In carrying out Radioactive Waste Management, BATAN is required to have a permit to carry out Radioactive Waste Management.
- (3) Requirements and procedures for applying for a permit to manage radioactive waste as intended in paragraph (2) are in accordance with the provisions of statutory regulations regarding permits for the use of ionizing radiation sources.

Article 4

**Radioactive Waste Producers carry out Management
Radioactive Waste originating from:**

- a. utilization of ionizing radiation sources; or
- b. utilization of construction, operation and treatment, decommissioning of nuclear installations.

Article 5

**BATAN carries out Radioactive Waste Management originating from
Radioactive Waste Generators which have been handed over to it.**

Article 6

- (1) **BATAN in implementing Waste Management
Radioactive can collaborate with or appoint state-owned enterprises,
cooperatives, and/or agencies
private.**
- (2) **Further provisions regarding procedures for cooperation and
appointment as referred to in paragraph (1) are regulated by
Presidential Regulation.**

CHAPTER III ...



PRESIDEN
REPUBLIK INDONESIA

- 5 -

CHAPTER III

**MANAGEMENT OF ENCLOSED RADIOACTIVE SUBSTANCES
UNUSED**

Part One

Collection and Grouping

Article 7

- (1) Radioactive Waste Producers are required to collect and group unused wrapped radioactive substances.**
- (2) After collection and grouping as intended in paragraph (1), Waste Producer**
Obligatory radioactivity:
 - a. send back to country of origin; or**
 - b. handed over to BATAN.**

Article 8

- (1) Sending unused wrapped radioactive substances back to the country of origin as intended in Article 7 paragraph (2) letter a is implemented by the Producer Radioactive Waste after obtaining:**
 - a. approval for sending back to the country of origin from the Head of BAPETEN; And**
 - b. Delivery approval from the Head of BAPETEN.**
- (2) Provisions regarding requirements and procedures for obtaining approval for sending back to the country of origin as intended in paragraph (1) letter a are regulated in statutory regulations regarding permits for the use of ionizing radiation sources.**

Article 9...



PRESIDEN
REPUBLIK INDONESIA

- 6 -

Article 9

- (1) Sending it back to the country of origin must be carried out by the Radioactive Waste Producer within the validity period of the approval for sending it back to the country of origin as intended in Article 8 paragraph (1) letter a.**

- (2) Producers of Radioactive Waste are required to report the delivery of unused wrapped radioactive substances back to the country of origin to the Head of BAPETEN no later than 14 (fourteen) working days from the time the return delivery takes place.**

Article 10

- (1) Delivery of unused wrapped radioactive substances to BATAN as intended in Article 7 paragraph (2) letter b must be carried out by the Radioactive Waste Producer after obtaining approval for delivery from the Head of BAPETEN.**

- (2) Implementation of handover to BATAN as follows referred to in paragraph (1) must:**
 - a. carried out no later than 14 (fourteen) working days from the issuance of approval for delivery by the Head of BAPETEN; And**

 - b. proven by the handover minutes prepared by BATAN.**

- (3) A copy of the handover minutes as referred to in paragraph (2) letter b must be submitted by the Radioactive Waste Producer to the Head of BAPETEN no later than 14 (fourteen) working days from the time of handover to BATAN.**

- (4) Requirements and procedures for obtaining approval for shipment are carried out in accordance with statutory regulations regarding the safety and security of transporting radioactive substances.**

Article 11 ...



PRESIDEN
REPUBLIK INDONESIA

- 7 -

Article 11

- (1) Producers of Radioactive Waste are required to submit a request for a determination to cease activities to the Head of BAPETEN after sending it back to the country of origin as intended in Article 9 or submitting it to BATAN as intended in Article 10 paragraph (1).**
- (2) Requirements and procedures for applications for termination of activities as intended in paragraph (1) are carried out in accordance with statutory regulations regarding permits for the use of ionizing radiation sources.**

Article 12

- (1) BATAN is obliged to collect and classify unused wrapped radioactive substances submitted by Radioactive Waste Generators.**
- (2) During the collection and grouping as intended in paragraph (1), BATAN can conduct studies.**
- (3) The study as intended in paragraph (2) is carried out to determine packaged radioactive substances that are not used as:**
 - a.**
encapsulated radioactive substances that can be used return;
 - b. recyclable encapsulated radioactive substances;**
or
 - c. Radioactive Waste.**
- (4) The Head of BATAN issues a report on the results of the study to determine unused packaged radioactive substances as intended in paragraph (3).**
- (5) The study as intended in paragraph (2) meets the standards, guidelines, requirements and/or procedures stipulated by the Head of BATAN.**

Article 13...



PRESIDEN
REPUBLIK INDONESIA

- 8 -

Article 13

- (1) In the event that the study report determines that it is a wrapped radioactive substance that can be reused as intended in Article 12 paragraph (3) letter a, the Head of BATAN issues a certificate stating that the wrapped radioactive substance can be reused.**
- (2) In the event that the study report determines that the wrapped radioactive substance can be recycled as intended in Article 12 paragraph (3) letter b, the Head of BATAN issues a certificate stating that the wrapped radioactive substance has been tested or re-standardized so that it can be reused.**
- (3) Reuse of radioactive substances as intended in paragraph (1) is carried out in accordance with the provisions of laws and regulations regarding licensing for the use of ionizing radiation sources.**

Article 14

In the event that the results of the study show the results as Radioactive Waste as intended in Article 12 paragraph (3) letter c, BATAN is obliged to carry out processing and storage.

The second part Processing and Storage

Article 15

- (1) Processing as intended in Article 14 is carried out using the method:
 - a. decay of activity; And**
 - b. conditioning.****
- (2) Further provisions regarding processing as intended in paragraph (1) are regulated by BAPETEN Head Regulations.**

Article 16...



PRESIDEN
REPUBLIK INDONESIA

- 9 -

Article 16

- (1) BATAN is obliged to store the processing results of unused wrapped radioactive substances which have been determined to be Radioactive Waste as intended in Article 12 paragraph (3) letter c in storage facilities.**
- (2) The storage facilities as intended in paragraph (1) must meet the requirements in accordance with the provisions of laws and regulations regarding permits for the use of ionizing radiation sources.**

Part Three

Transport and Disposal

Article 17

- (1) BATAN can transport unused wrapped radioactive substances which have been determined to be Radioactive Waste as intended in Article 12 paragraph (3) letter c after processing or storage activities.**
- (2) Transportation as intended in paragraph (1) is carried out in accordance with statutory regulations regarding the safety and security of transportation of radioactive substances.**

Article 18

- (1) BATAN carries out the disposal of unused wrapped radioactive substances which have been determined to be Radioactive Waste as intended in Article 12 paragraph (3) letter c.**
- (2) Disposal as intended in paragraph (1) is carried out at the facility: a. near ground level; or b. medium depth.**

(3) Development...



PRESIDEN
REPUBLIK INDONESIA

- 10 -

- (3) The construction, operation and closure of disposal facilities as intended in paragraph (2) must have permission from the Head of BAPETEN.**
- (4) Provisions regarding requirements and procedures for obtaining permits as intended in paragraph (3) are regulated in accordance with the provisions of statutory regulations.**

Part Four Recording and Reporting

Article 19

- (1) Producers of Radioactive Waste during the collection and grouping of unused wrapped radioactive substances are required to carry out recording which includes:
 - a. inventory of packaged radioactive substances that are not used; And**
 - b. activities of collecting and grouping substances unused wrapped radioactive.****
- (2) The recording results as intended in paragraph (1) must be reported to the Head of BAPETEN at least 1 (once) in 6 (six) months.**

Article 20

- (1) BATAN during the processing, storage and disposal of unused wrapped radioactive substances which have been determined as Waste Radioactivity as intended in Article 12 paragraph (3) letter c is required to carry out recording which includes:
 - a. inventory of unused encapsulated radioactive substances;**
 - b. activity ...****



PRESIDEN
REPUBLIK INDONESIA

- 11 -

b. processing, storage and disposal of unused wrapped radioactive substances.

(2) The recording results as intended in paragraph (1) must be reported to the Head of BAPETEN at least 1 (once) in 6 (six) months.

CHAPTER IV

MANAGEMENT OF OPEN RADIOACTIVE SUBSTANCES UNUSED AND MATERIALS AS WELL CONTAMINATED AND/OR EQUIPMENT UNUSED ACTIVATED

Part One

Collection and Grouping

Article 21

Radioactive Waste Generators are required to collect and group unused open radioactive substances and unused contaminated and/or activated materials and equipment.

The second part

Processing and Storage

Article 22

(1) Radioactive Waste Producers are required to process unused open radioactive substances and unused contaminated and/or activated materials and equipment.

(2) Processing as intended in paragraph (1) is carried out using the method:

a. decay of activity;

b. reduction...



PRESIDEN
REPUBLIK INDONESIA

- 12 -

- b. volume reduction;
 - c. change of composition; and/or
 - d. conditioning.
- (3) Further provisions regarding processing as intended in paragraph (2) are regulated by BAPETEN Head Regulations.

Article 23

- (1) Processing of unused open radioactive substances and unused contaminated and/or activated materials and equipment as intended in Article 22 paragraph (1) is carried out until the radioactivity reaches a value below or equal to the Clearance Level.
- (2) In the event that during or after the processing of unused open radioactive substances and unused contaminated and/or activated materials and equipment has reached a value below or equal to the Klierens Level, the Radioactive Waste Producer is obliged to submit an application for a Klierens determination to the Head of BAPETEN.
- (3) In the event that during or after the processing of unused open radioactive substances and unused contaminated and/or activated materials and equipment cannot achieve a value below or equal to the Clearance Level, the Radioactive Waste Producer is obliged to hand it over to BATAN.
- (4) Producers of Radioactive Waste are prohibited from carrying out dilution in order to obtain unused open radioactive substances and unused contaminated and/or activated materials and equipment to reach values below or equal to the Clearance Level.
- (5) Provisions regarding requirements and procedures for determining Klierens are regulated in statutory regulations regarding licensing for the use of ionizing radiation sources.

Article 24...



PRESIDEN
REPUBLIK INDONESIA

- 13 -

Article 24

Radioactive waste generators are required to carry out temporary storage after processing unused open radioactive substances and unused contaminated and/or activated materials and equipment before handing them over to BATAN.

Article 25

In the event that unused contaminated and/or activated materials and equipment cannot be processed and/or temporarily stored, the Radioactive Waste Producer is obliged to hand them over to BATAN.

Article 26

- (1) Delivery to BATAN as intended in Article 25 must be carried out by the Radioactive Waste Producer after obtaining approval for delivery from the Head of BAPETEN.**
- (2) Implementation of handover to BATAN as follows as intended in paragraph (1) must:**
 - a.**
carried out no later than 14 (fourteen) working days from the issuance of approval for delivery by the Head of BAPETEN; And
 - b. proven by the handover minutes prepared by BATAN.**
- (3) A copy of the handover minutes as referred to in paragraph (2) letter b must be submitted by the Radioactive Waste Producer to the Head of BAPETEN no later than 14 (fourteen) working days from the time of handover to BATAN.**
- (4) Requirements and procedures for obtaining approval for shipment are carried out in accordance with statutory regulations regarding the safety and security of transporting radioactive substances.**

Article 27...



PRESIDEN
REPUBLIK INDONESIA

- 14 -

Article 27

- (1) BATAN is obliged to store unused open radioactive substances and contaminated and/or activated materials and equipment that are not used in storage facilities after processing.**

- (2) In the event that unused open radioactive substances and unused contaminated and/or activated materials and equipment as intended in paragraph (1) have reached a value below or equal to the Klierens Level, BATAN is obliged to submit an application for a Klierens determination to the Head BAPETEN.**

- (3) Storage facilities as intended in paragraph (1) must meet the requirements in accordance with the provisions of laws and regulations regarding permits for the use of ionizing radiation sources.**

Part Three

Transport and Disposal

Article 28

- (1) BATAN can transport unused open radioactive substances and contaminated and/or activated materials and equipment that are not used after processing or storage activities.**

- (2) Transportation of unused open radioactive substances and unused contaminated and/or activated materials and equipment as intended in paragraph (1) is carried out in accordance with statutory regulations regarding the safety and security of transporting radioactive substances.**

Article 29 ...



PRESIDEN
REPUBLIK INDONESIA

- 15 -

Article 29

- (1) Disposal of unused open radioactive substances and unused contaminated and/or activated materials and equipment is carried out by BATAN.**
- (2) Disposal of unused open radioactive substances and unused contaminated and/or activated materials and equipment as intended in paragraph (1) is carried out at the facilities: a. near ground level; or b. medium depth.**
- (3) The construction, operation and closure of disposal facilities as intended in paragraph (2) must have permission from the Head of BAPETEN.**
- (4) Provisions regarding requirements and procedures for obtaining permits as intended in paragraph (3) are regulated in accordance with the provisions of statutory regulations.**

Part Four

Recording and Reporting

Article 30

- (1) Producers of Radioactive Waste during collection, grouping and/or processing are required to carry out recording which includes:**
 - a. inventory of unused open radioactive substances and unused contaminated and/or activated materials and equipment; And**
 - b. activities of collecting, grouping, and/or processing unused open radioactive substances and unused contaminated and/or activated materials and equipment.**

(2) Results...



PRESIDEN
REPUBLIK INDONESIA

- 16 -

(2) The recording results as intended in paragraph (1) must be reported to the Head of BAPETEN at least 1 (once) in 6 (six) months.

Article 31

(1) During the processing, storage and disposal of unused open radioactive substances and unused contaminated and/or activated materials and equipment, BATAN is obliged to carry out recording which includes:

a. inventory of unused open radioactive substances and unused contaminated and/or activated materials and equipment; And

b. processing, storage and disposal of unused open radioactive substances and unused contaminated and/or activated materials and equipment.

(2) The recording results as intended in paragraph (1) must be reported to the Head of BAPETEN at least 1 (once) in 6 (six) months.

CHAPTER V

SPENT NUCLEAR FUEL MANAGEMENT

Part One

Temporary storage

Article 32

Radioactive Waste Producers are required to carry out temporary storage of Used Nuclear Fuel for at least the duration of the nuclear reactor's operation.

Article 33 ...



PRESIDEN
REPUBLIK INDONESIA

- 17 -

Article 33

After carrying out temporary storage as intended in Article 32, Radioactive Waste Producers are obliged to:

- a. sending back Spent Nuclear Fuel to the country of origin; or
- b. hand over the Spent Nuclear Fuel to BATAN.

Article 34

(1) Before sending the Used Nuclear Fuel back to the country of origin as intended in Article 33 letter a, the Radioactive Waste Producer must obtain:

- a. approval for shipping back to the country of origin from Head of BAPETEN; And
- b. Delivery approval from the Head of BAPETEN.

(2) Requirements and procedures for obtaining approval for sending back to the country of origin as intended in paragraph (1) letter a are carried out in accordance with statutory regulations regarding permits for the use of nuclear materials.

Article 35

(1) The sending of Used Nuclear Fuel back to the country of origin must be carried out by the Radioactive Waste Producer during the validity period of the approval for sending back from the Head of BAPETEN.

(2) Producers of Radioactive Waste are required to report the implementation of sending back Used Nuclear Fuel to the country of origin to the Head of BAPETEN no later than 14 (fourteen) working days from the time the return delivery takes place.

Article 36...



PRESIDEN
REPUBLIK INDONESIA

- 18 -

Article 36

- (1) Delivery to BATAN as intended in Article 33 letter b must be carried out by the Radioactive Waste Producer after obtaining approval for delivery from the Head of BAPETEN.**

- (2) Implementation of handover to BATAN as follows referred to in paragraph (1) must:**
 - a. carried out no later than 14 (fourteen) working days from the issuance of approval for delivery by the Head of BAPETEN; And**

 - b. proven by the handover minutes prepared by BATAN.**

- (3) A copy of the handover minutes as referred to in paragraph (2) letter b must be submitted by the Radioactive Waste Producer to the Head of BAPETEN no later than 14 (fourteen) working days from the time of handover to BATAN.**

- (4) Requirements and procedures for obtaining approval for shipment are carried out in accordance with statutory regulations regarding the safety and security of transporting radioactive substances.**

Article 37

- (1) Radioactive Waste Producers can transport Used Nuclear Fuel during temporary storage activities.**

- (2) Transportation of Used Nuclear Fuel as intended in paragraph (1) is carried out in accordance with statutory regulations regarding safety and security of transportation of radioactive substances.**

The second part ...



PRESIDEN
REPUBLIK INDONESIA

- 19 -

**The second part
Storage and Disposal**

Article 38

- (1) BATAN stores Nuclear Fuel Used.**
- (2) In storing Used Nuclear Fuel as intended in paragraph (1), BATAN is required to have a permit: a. utilization of nuclear materials; And**
 - b. construction and operation of temporary storage installations for Spent Nuclear Fuel.**
- (3) The requirements and procedures for obtaining permits as intended in paragraph (2) are carried out in accordance with statutory regulations regarding nuclear installation licensing.**

Article 39

- (1) Disposal of Used Nuclear Fuel is carried out by BATAN.**
- (2) Disposal of Used Nuclear Fuel as intended in paragraph (1) is carried out at a sustainable storage installation.**
- (3) Construction, operation and closure of sustainable storage installations must have permission from the Head of BAPETEN.**
- (4) Requirements and procedures for obtaining permits as intended in paragraph (3) are regulated in accordance with statutory regulations regarding licensing of nuclear installations.**

Article 40 ...



PRESIDEN
REPUBLIK INDONESIA

- 20 -

Article 40

- (1) BATAN provides a sustainable storage place for Used Nuclear Fuel.**
- (2) Determination of the sustainable storage location for Used Nuclear Fuel as intended in paragraph (1) is determined by the Government after obtaining approval from the House of Representatives of the Republic of Indonesia.**
- (3) Determination of a sustainable storage place for Used Nuclear Fuel by the Government as intended in paragraph (2) is carried out in accordance with the provisions of statutory regulations.**

Part Three

Recording and Reporting

Article 41

- (1) Producers of Radioactive Waste during temporary storage and transportation are required to carry out recording which includes: a. inventory of Spent Nuclear Fuel; And**
 - b. Used Nuclear Fuel transportation storage temporary And activities.**
- (2) The recording results as intended in paragraph (1) must be reported to the Head of BAPETEN at least 1 (once) in 6 (six) months.**

Article 42

- (1) BATAN during storage, transportation and/or disposal of Fuel Used Nuclear is required to carry out recording which includes:**
 - a. inventory...**



PRESIDEN
REPUBLIK INDONESIA

- 21 -

- a. inventory of Spent Nuclear Fuel; And
 - b. Spent Nuclear Fuel Management activities.
- (2) The recording results as intended in paragraph (1) must be reported to the Head of BAPETEN at least 1 (once) in 6 (six) months.

CHAPTER VI

IMPLEMENTATION DEVELOPMENT

RADIOACTIVE WASTE MANAGEMENT

Article 43

- (1) BATAN provides guidance on the implementation of Radioactive Waste Management which includes guidance: a. technical; And
- b. educative.
- (2) Technical guidance as intended in paragraph (1) letter a is carried out against:
- a. Radioactive Waste Generator; And
 - b. State-Owned Enterprises, cooperatives, or private entities that collaborate with or are appointed by BATAN to manage Radioactive Waste.
- (3) Educational guidance as intended in paragraph (1) letter b is carried out for the community.
- (4) Technical guidance for the implementation of Radioactive Waste Management as intended in paragraph (2) includes at least:
- a. training;
 - b. socialization;
 - c. consultation; and/or
 - d. help ...



PRESIDEN
REPUBLIK INDONESIA

- 22 -

d. technical support.

- (5) Educational guidance regarding the implementation of Radioactive Waste Management as referred to in paragraph (3) may take the form of socialization.
- (6) Further provisions regarding procedures for implementing guidance on the implementation of Radioactive Waste Management as referred to in paragraph (1) are regulated by a Regulation of the Head of BATAN.

CHAPTER VII

CROSS-BORDER MOVEMENT

Article 44

- (1) Sending Used Nuclear Fuel from the country of origin to the country of destination through and/or stopping in the customs area of the Unitary State of the Republic of Indonesia with or without changing transportation means must obtain approval from the Head of BAPETEN before carrying out the delivery.
- (2) To obtain approval as intended in paragraph (1), the sender of Radioactive Waste must submit written notification to the Head BAPETEN and attach documents:
 - a. approval from the home country regulatory body; b. approval from the regulatory body of the destination country; And
 - c. transport that contains at least:
 - 1. identity of sender, transporter and recipient;
 - 2. date and length of stay;
 - 3. transportation route;
 - 4. type, activity and quantity of Spent Nuclear Fuel; And
 - 5. packaging type.

(3) Delivery...



PRESIDEN
REPUBLIK INDONESIA

- 23 -

- (3) Delivery of Used Nuclear Fuel as intended in paragraph (1) is carried out in accordance with statutory regulations regarding the safety and security of transporting radioactive substances.**

Article 45

- (1) The Head of BAPETEN assesses the documents as intended in Article 44 paragraph (2) no later than 3 (three) working days from the time the notification is received.**
- (2) After carrying out the assessment as intended in paragraph (1), the Head of BAPETEN gives approval or rejection of the notification.**
- (3) The approval as intended in paragraph (2) contains at least:**
- a. identity of the sender of Spent Nuclear Fuel;**
 - b. country of origin and destination country of Nuclear Fuel Used;**
 - c. documents regarding the type, activity, characteristics and quantity of Used Nuclear Fuel that will pass through and/or stop in the customs area of the Unitary State of the Republic of Indonesia; d.**
- means of transportation to be used;**
- e. date of transportation, stopover time, and name of the port or airport where the Used Nuclear Fuel enters and exits;**
- And**
- f. approval validity period.**
- (4) Rejection as intended in paragraph (2) must be accompanied by reasons for the rejection.**

Article 46

- (1) Every person or entity is prohibited from importing Radioactive Waste originating from abroad into the territory of the Unitary State of the Republic of Indonesia.**

(2) Prohibition ...



PRESIDEN
REPUBLIK INDONESIA

- 24 -

- (2) The prohibition as intended in paragraph (1) is excluded for Radioactive Waste originating from radioactive substances produced domestically.
- (3) Any person or entity that violates the provisions as intended in paragraph (1) will be subject to sanctions in accordance with the provisions of statutory regulations.

CHAPTER VIII

ADMINISTRATIVE SANCTIONS

Article 47

- (1) The Head of BAPETEN applies administrative sanctions to Radioactive Waste Producers if violations are found in Radioactive Waste Management.
- (2) Administrative sanctions as intended in paragraph (1) include:
 - a. written warning;
 - b. temporary suspension of operation of facilities or installations; or
 - c. license revocation.

Article 48

- (1) Producers of Radioactive Waste who violate the provisions as intended in Article 7, Article 9, Article 10 paragraph (1), paragraph (2), and paragraph (3), Article 11 paragraph (1), Article 19, Article 21, Article 22 paragraph (1), Article 23 paragraph (2) and paragraph (3), Article 24, Article 25, Article 26 paragraph (1), paragraph (2), and paragraph (3), Article 30, Article 32, Article 33, Article 35, Article 36 paragraph (1), paragraph (2), and paragraph (3), and/or Article 41 are subject to a written
- (2) Producer...



PRESIDEN
REPUBLIK INDONESIA

- 25 -

- (2) Radioactive Waste Producers are required to follow up on written warnings within a maximum period of 10 (ten) working days from the date of receipt of the written warning.
- (3) In the event that the Radioactive Waste Producer does not follow up on the written warning as intended in paragraph (2), the Head of BAPETEN will give another written warning.
- (4) The written warning as intended in paragraph (3) must be complied with by Radioactive Waste Producers within a period of 10 (ten) working days from the date of receipt of the written warning.
- (5) In the event that the Radioactive Waste Generator still does not comply with the written warning as intended in paragraph (4), the Head of BAPETEN shall revoke the permit.

Article 49

- (1) In the event of a violation of the provisions as intended in Article 23 paragraph (4) and Article 32, the Head of BAPETEN may immediately temporarily suspend the operation of the Radioactive Waste Generating facility or installation.
- (2) The temporary suspension as referred to in paragraph (1) is valid until the Radiation Safety requirements are met.
- (3) In the event that during the temporary suspension as referred to in paragraph (1) the Radioactive Waste Generator does not fulfill the Radiation Safety requirements and continues to operate its facilities or installations, the Head of BAPETEN can immediately revoke the permit for Utilizing Nuclear Energy.
- (4) The temporary suspension as referred to in paragraph (1) is carried out based on the assessment of the Head of BAPETEN.

Article 50 ...



PRESIDEN
REPUBLIK INDONESIA

- 26 -

Article 50

In the event of revocation of the permit as intended in Article 48 paragraph (5) and/or Article 49 paragraph (3), the Radioactive Waste Producer must still be responsible for safeguarding the Radioactive Waste.

CHAPTER IX

CLOSING

Article 51

At the time this Government Regulation comes into force, all Legislative Regulations which are implementing regulations of Government Regulation Number 27 of 2002 concerning Radioactive Waste Management (State Gazette of the Republic of Indonesia of 2002 Number 52, Supplement to State Gazette of the Republic of Indonesia Number 4202), are declared to still be in force. as long as it does not conflict with the provisions of this Government Regulation.

Article 52

When this Government Regulation comes into force, Government Regulation Number 27 of 2002 concerning Management of Radioactive Waste (State Gazette of the Republic of Indonesia of 2002 Number 52, Supplement to State Gazette of the Republic of Indonesia Number 4202) is revoked and declared invalid.

Article 53

This Government Regulation comes into force on the date of promulgation.

So that ...



PRESIDEN
REPUBLIK INDONESIA

- 27 -

So that everyone is aware, this Government Regulation is ordered to be promulgated by placing it in the State Gazette of the Republic of Indonesia.

Set in Jakarta

on September 12, 2013

PRESIDENT OF THE REPUBLIC OF INDONESIA,

signed.

DR. H. SUSILO BAMBANG YUDHOYONO

Promulgated in Jakarta

on September 12, 2013

MINISTER OF LAW AND HUMAN RIGHTS

REPUBLIC OF INDONESIA,

signed.

AMIR SYAMSUDIN

STATE GAZETTE OF THE REPUBLIC OF INDONESIA 2013 NUMBER 152

The copy corresponds to the original
MINISTRY OF STATE SECRETARIAT
REPUBLIC OF INDONESIA

Assistant Deputy for Legislation
Economic Sector,

Lydia Silvanna Djaman



PRESIDEN
REPUBLIK INDONESIA

EXPLANATION

ON

GOVERNMENT REGULATIONS OF THE REPUBLIC OF INDONESIA

NUMBER 61 OF 2013

ABOUT

RADIOACTIVE WASTE MANAGEMENT

I. GENERAL

The use of nuclear energy in various fields, including health, industry, agriculture, research, operation of nuclear installations, both for research and development and radioisotope production, has increased in the last decade. Apart from having advantages or positive aspects for increasing people's welfare and prosperity, this utilization also has the potential for radiation hazards to workers, community members and the environment. Apart from that, this use can produce radioactive waste which also has the potential for danger so that radioactive waste must be managed properly and appropriately. Radioactive Waste Management is an activity that includes collecting, grouping, processing, transporting, storing and/or disposing of Radioactive Waste.

The obligations and authority for implementing Radioactive Waste Management are based on the classification of Radioactive Waste which consists of low level Radioactive Waste, medium level Radioactive Waste and high level Radioactive Waste.

Producers of low-level and medium-level radioactive waste have the obligation to collect, classify or process them before handing them over to BATAN. Meanwhile, for high level Radioactive Waste, Radioactive Waste Producers are allowed to temporarily store the waste in their installations before returning it to the country of origin or producing country or handing it over to BATAN.

Management ...



PRESIDEN
REPUBLIK INDONESIA

- 2 -

Radioactive Waste Management was previously regulated in the Republic of Indonesia Government Regulation Number 27 of 2002 concerning Radioactive Waste Management. However, in line with the development of science and technology for Radioactive Waste Management and the need for harmonization with the latest laws and regulations, including laws and regulations regarding permits for the use of ionizing radiation sources and nuclear installation permits as well as regulations regarding radiation safety and nuclear installations, it is necessary to develop regulations regarding Management. Radioactive Waste. Apart from that, it is necessary to adjust and harmonize with international recommendations related to the safety of Radioactive Waste Management.

Returning Radioactive Waste to the country of origin is also carried out in the context of efficiency or reducing the amount of waste managed, as long as a return agreement is made with the supplier country. Bearing this in mind, the reorganization of Radioactive Waste Management in this Government Regulation includes:

- a. Radioactive Waste classification that is more detailed and quantified by following international standards and more appropriate safety methods;
- b. regulations regarding unused packaged radioactive substances, because unused packaged radioactive substances may still be reused or recycled after prior review by BATAN;
- c. type of disposal facility adapted to the Waste classification Radioactive;
- d. technical guidance for Radioactive Waste Management by BATAN for Radioactive Waste Producers and stakeholders; And
- e. cross-border movement.

II. ARTICLE BY ARTICLE

article 1

Quite clear.

Section 2 ...



PRESIDEN
REPUBLIK INDONESIA

- 3 -

Section 2

Paragraph (1)

Classification of Radioactive Waste is based on activity, activity concentration, half-life, and/or type of radiation.

Letter a

Low level Radioactive Waste is divided into 3 (three) subclassifications consisting of Radioactive Waste:

- 1. very short half-life;**
- 2. very low level; And**
- 3. relatively low level.**

Very short half-life Radioactive Waste is Radioactive Waste where most of the nuclides have a half-life of less than 150 (one hundred and fifty) days.

Very low level Radioactive Waste can be:

- 1. unused encapsulated radioactive substances that have a half-life of less than 15 (fifteen) years and activity above the Exclusion Level of up to 10 MBq (ten megabecquerels); 2. unused encapsulated radioactive substances that have a half-life between 15 (fifteen) and 30 (thirty) years and activity above the Exception Level of up to 100 kBq (one hundred kilobecquerels);**
- 3. Radioactive waste other than unused packaged radioactive substances has an activity concentration between the Exception Level and 100 (one hundred) times the Exception Level.**

What is meant by "Exclusion Level" is the activity and activity concentration value determined by statutory regulations.

Waste ...



PRESIDEN
REPUBLIK INDONESIA

- 4 -

Relatively low level Radioactive Waste can be:

- 1. unused encapsulated radioactive substances that have a half-life of less than 15 (fifteen) years and activity above 10 MBq (ten *megabecquerels*) to 100 MBq (one hundred *megabecquerels*);**
- 2. unused encapsulated radioactive substances which have a half-life of between 15 (fifteen) to 30 (thirty) years and an activity of between 100 kBq (one hundred *kilobecquerels*) to 1 MBq (one *megabecquerel*);** 3. Radioactive waste other than unused packaged radioactive substances which have an activity concentration between 100 Bq/g (one hundred *becquerels* per gram) to 1000 (one thousand) times the Exclusion Level for beta emitters or an activity concentration between 100 Bq/g (one hundred *becquerels* per gram) up to 400 Bq/g (four hundred *becquerels* per gram) for alpha emitters.

Letter b

Medium level radioactive waste can be in the form

- of:
- 1. unused packaged radioactive substances that have a half-life of less than 15 (fifteen) years and an activity between 100 MBq (one hundred *megabecquerels*) to 100 TBq (one hundred *terabecquerels*);**
 - 2. unused encapsulated radioactive substances which have a half-life of between 15 (fifteen) to 30 (thirty) years and an activity of between 1 MBq (one *megabecquerel*) to 1 PBq (one *petabecquerel*);**
 - 3. unused encapsulated radioactive substances that have a half-life of more than 30 (thirty) years and activity between 40 MBq (forty *megabecquerels*) to 10 GBq (ten *gigabecquerels*).**
 - 4. Radioactive waste other than unused packaged radioactive substances which have an activity concentration between 1000 (one thousand) times the Clearance Level up to 100 GBq/g (one hundred *gigabecquerels* per gram) for beta and gamma emitters or an activity concentration between 400 Bq/g (four hundred *becquerel* per gram) to 100 GBq/g (one hundred *gigabecquerel* per gram) for alpha emitters.**

Letter c...



PRESIDEN
REPUBLIK INDONESIA

- 5 -

Letter c

Quite clear.

Paragraph (2)

Letter a

What is meant by "unused encapsulated radioactive substances" are radioactive substances permanently contained in tightly bound capsules which are no longer used by the permit holder, among others, due to ineffective use as a result of radioactive decay, damage, or other factors.

Letter b

What is meant by "unused open radioactive substances" are unsealed radioactive substances in the form of solid, liquid or gas which are no longer used by the permit holder, among others, because they are leftovers from use in the industrial, health or other fields.

Letter c

Quite clear.

Paragraph (3)

Characteristics of high level radioactive waste include the origin of the waste, *burn up factor*, uranium and plutonium content, activity, heat of generation, history of *loading* and *unloading* of nuclear fuel.

Article 3

Quite clear

Article 4

Quite clear.

Article 5

Quite clear.

Article 6...



PRESIDEN
REPUBLIK INDONESIA

- 6 -

Article 6

Quite clear.

Article 7

Quite clear.

Article 8

Paragraph (1)

Letter a

What is meant by "approval for sending back to country of origin" is the approval issued by the Head of BAPETEN to hand back unused wrapped radioactive substances to the country of origin that produced the unused wrapped radioactive substances.

Letter b

What is meant by "shipment approval" is the approval given by BAPETEN before transporting unused wrapped radioactive substances using land, sea and air transportation modes.

Paragraph (2)

Quite clear.

Article 9

Quite clear.

Article 10

Quite clear.

Article 11

Quite clear.

Article 12...



PRESIDEN
REPUBLIK INDONESIA

- 7 -

Article 12

Quite clear.

Article 13

Quite clear.

Article 14

Quite clear

Article 15

Paragraph (1)

Letter a

Decay activities are carried out, among other things, through storage activities for decay (*decay storage*).

Letter b

Conditioning of Radioactive Waste is carried out, among other things, by immobilization, packaging and/or outer packaging.

Paragraph (2)

Quite clear.

Article 16

Quite clear.

Article 17

Quite clear.

Article 18

Quite clear.

Article 19...



PRESIDEN
REPUBLIK INDONESIA

- 8 -

Article 19

Quite clear.

Article 20

Quite clear.

Article 21

Quite clear.

Article 22

Paragraph (1)

Quite clear.

Paragraph (2)

Letter a

Decay activities are carried out, among other things, through storage activities for decay (*decay storage*).

Letter b

Volume reduction is carried out, among other things, through compaction, incineration, evaporation and/or coagulation activities.

Letter c

Changes in composition are carried out, among other things, through incineration, coagulation, and/or chemical and physical decomposition.

Letter d

Conditioning of Radioactive Waste is carried out, among other things, through immobilization, wrapping and/or outer packaging.

Paragraph (3)

Quite clear.

Article 23

Quite clear.

Article 24...



PRESIDEN
REPUBLIK INDONESIA

- 9 -

Article 24

Quite clear.

Article 25

Quite clear.

Article 26

Quite clear.

Article 27

Quite clear.

Article 28

Quite clear.

Article 29

Quite clear.

Article 30

Quite clear.

Article 31

Quite clear.

Article 32

Quite clear.

Article 33

Quite clear.

Article 34...



PRESIDEN
REPUBLIK INDONESIA

- 10 -

Article 34

Paragraph (1)

Letter a

What is meant by "approval for sending back to country of origin" is the approval issued by the Head of BAPETEN to hand back the Used Nuclear Fuel to the country of origin that produced the Used Nuclear Fuel.

Letter b

What is meant by "delivery approval" is the approval given by BAPETEN before the transportation of Used Nuclear Fuel is carried out.

Paragraph (2)

Quite clear.

Article 35

Quite clear.

Article 36

Quite clear.

Article 37

Quite clear.

Article 38

Quite clear.

Article 39

Quite clear.

Article 40 ...



PRESIDEN
REPUBLIK INDONESIA

- 11 -

Article 40

Quite clear.

Article 41

Quite clear.

Article 42

Quite clear.

Article 43

Paragraph (1)

Quite clear.

Paragraph (2)

Quite clear.

Paragraph (3)

What is meant by "community" includes communities that are potentially affected and academics.

Paragraph (4)

Quite clear.

Paragraph (5)

Quite clear.

Paragraph (6)

Quite clear.

Article 44

Paragraph (1)

What is meant by "country of origin" is the country where cross-border movement is planned or initiated.

What is meant by "destination country" is the country of final destination of cross-border movement.

Paragraph (2) ...



PRESIDEN
REPUBLIK INDONESIA

- 12 -

Paragraph (2)

Quite clear.

Paragraph (3)

Quite clear.

Article 45

Quite clear.

Article 46

Paragraph (1)

Quite clear.

Paragraph (2)

Radioactive waste originating from domestic production is proven by production and/or delivery documents.

Paragraph (3)

What is meant by "legislative regulations" includes, among other things, the Law on Environmental Protection and Management.

Article 47

Quite clear.

Article 48

Quite clear.

Article 49

Quite clear.

Article 50

Quite clear.

Article 51 ...



PRESIDEN
REPUBLIK INDONESIA

- 13 -

Article 51

Quite clear.

Article 52

Quite clear.

Article 53

Quite clear.

SUPPLEMENT TO THE STATE GAZETTE OF THE REPUBLIC OF INDONESIA NUMBER 5445