UNOFFICIAL TRANSLATION

GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA
NUMBER 54 OF 2012
ON
SAFETY AND SECURITY OF NUCLEAR INSTALLATIONS

BY THE GRACE OF THE GOD ALMIGHTY

THE PRESIDENT OF THE REPUBLIC OF INDONESIA

Considering : That to implement Article 16 Paragraph 2 Act Number 10 of 1997 on Nuclear Energy, Government Regulation on The Safety and Security on Nuclear Installations shall be enacted;

Noting :
1. Article 5 paragraph 2 of the Constitution of the Republic of Indonesia of 1945;
2. Act Number 10 of 1997 on Nuclear Energy (State Gazette year 1997 Number 23, and the supplement of State Gazette Number 3676);

HAS DECIDED:

To enact : GOVERNMENT REGULATION ON SAFETY AND SECURITY OF NUCLEAR INSTALLATIONS

CHAPTER I
GENERAL PROVISION

Article 1

In this Government Regulation:
1. Nuclear Installation, Nuclear Reactor, and Nuclear Material are as stipulated in Act Number 10 of 1997 on Nuclear Energy.
2. Site is a land-based location used for construction, operation, and decommissioning, one or more nuclear installations along with its auxiliary systems.
3. Construction is any activity to construct a nuclear Installation on chosen site, including architect, civil, mechanic, electric, environmental activities, the installment and testing of structure, system and components of nuclear installation.
4. Commissioning is any testing activity to ensure that the structure, system, and components installed in nuclear installations that are operated by nuclear fuel meet the requirements and design criteria.
5. Nuclear Installation Decommissioning that is further namely Decommissioning is any activity to ultimately terminate the operation of nuclear installations permanently, involving removing nuclear fuel from nuclear installation, dismantling installation components, decontamination, and final security process.
6. Modification is an effort to change the structure, system, and component which are significant to safety, including reduction and/or increment.
7. Utilization is any activity using nuclear installation, experiment, or experimental

equipment during the operation of nuclear installation.

8. Surveillance is inspection, functional testing, and calibration that is performed periodically to the parameter values if structure, system, and component to ensure the compliance to the limiting and condition of operation, and safety of nuclear installation.
9. Ageing Management is any activity of engineering, operation and maintenance to control the ageing effect towards the critical structure, system, and components within acceptable limit.
10. Normal operation is a process of nuclear installation operation in the operational limit condition that is declared in the limiting and condition operation.
11. Anticipated Operation Occurrence is an operational process deviating from normal operation which is expected to occur at least once during the operating lifetime of nuclear installation but which, in view of appropriate design provisions, does not cause any significant damage to items important to safety or lead to accident conditions.
12. Design Basis Accident is an accident conditions againt which a nuclear installation is designed according to established design criteria.
13. Beyond Design Basis Accident is an accident that is more severe than the design basis accident and could cause the release of radioactive to the environment.
14. Nuclear Emergency Preparedness is a series of systematic and planned activities that are performed to anticipate nuclear emergency providing infrastructure aspects and response function capability to perform nuclear emergency response in an appropriate, fast, effective, and efficient manner.
15. Nuclear Emergency is a state of hazard that threatens the safety of human, loss of property, or damage to the environment, which is the result of radioactive material release from a nuclear installation or a specific event.
16. Nuclear Emergency Response is a series of activities that are performed as soon as a nuclear emergency event takes place to reduce serious consequences of an emergency to the human safety, loss of property, or damage to the environment.
17. Safeguards is any action to ensure the peaceful uses of nuclear material.
18. Design Basis Threat is the attributes and characteristics of potential insider and external adversaries against which a physical protection system is designed and evaluated.
19. Physical Protection is measures taken to detect and prevent unauthorized removal of nuclear material and to prevent sabotage to the nuclear installation.
20. Physical Protection System is an integrated sets of equipment, installations, personnel, and procedures that provide physical protection to the nuclear installation and nuclear material.
21. Nuclear Energy Regulatory Agency named BAPETEN is a regulatory authority stipulated in Act No. 10 year 1997 on Nuclear Energy.
22. National Disaster Management Agency named NDMA, Regional Disaster Management Agency named RDMA, are as stipulated in Act Number 24 of 2007 on Disaster Response.

23. Central Government named Government and Province Government are as stipulated in Act Number 32 of 2004 on Regional Government as has been altered by Act Number 18 of 2008 on the Second Amendment on Act Number 32 of 2004 on Regional Government.

Article 2

(1) To achieve the safety and security of a nuclear installation, any legal person constructing, operating, and decommissioning shall have a license from Chairman of BAPETEN.
(2) Requirements and process of licensing as stipulated in paragraph 1 are regulated in a specific government regulation.
(3) The safety of a nuclear installation as stipulated in paragraph 1 is intended to protect the workers, public, and the environment, that is performed through an effective defense measures towards the radiation hazard results in the nuclear installation.
(4) The security of nuclear installation as stipulated in paragraph 1 is intended to:
    a. prevent the deviation of the utilization of nuclear material from the peaceful purposes; and
    b. prevent, detect, assess, deter and response the act of unauthorized removal of the nuclear material unlawfully and sabotage of nuclear installation and material.

Article 3

The safety and security of nuclear installation consist of:
a. technical requirements of nuclear installation safety;
b. technical requirements of nuclear installation security;
c. nuclear installation safety and security management; and
d. nuclear emergency preparedness and response.

CHAPTER II
TECHNICAL REQUIREMENT OF NUCLEAR INSTALLATION SAFETY

Part One
General

Article 4

Nuclear installation safety Technical Requirements as stipulated in Article 3 letter a, consist of:

a. site monitoring;
b. design and construction;
c. commissioning;
d. operation;
e. modification;
f. decommissioning; and
g. safety verification and assessment.

Part Two

Site Monitoring

Article 5

(1) Licensee shall monitor the site of nuclear installation during construction, commissioning, operation, and decommissioning stage.
(2) Nuclear installation site monitoring covers hazard characteristic monitoring due to natural event and human induced event to the safety of nuclear installation.
(3) Hazard characteristic as stipulated in paragraph 2 consist of aspects such as:
    a. effects of natural events and human induced events to the safety of nuclear installation at the site and its region;
    b. site characteristic and its region affecting the radioactive material release from the nuclear installation to the human and the environment; and
    c. public demography and other characteristics of site and its region that relate to the risk evaluation of the public and the appropriate implementation of nuclear emergency preparedness program.

Article 6

(1) The licensee shall perform engineering solution if the result of the site monitoring during the construction, commissioning, or operation states that there is a hazard significant to the safety of nuclear installation.
(2) Engineering solution as stipulated in paragraph 1 such as design changes or modification shall consist at least:
    a. structure reinforcing;
    b. structure, system, and component strengthening; and
    c. providing of protection equipments.

Article 7

(1) Site monitoring as stipulated in Article 5 shall be performed according to the environmental monitoring plan and environmental management plan.
(2) Environmental monitoring plan and environmental management plan as stipulated in paragraph 1 consist of at least:
    a. significant impact and source of impact;

b. impact benchmark;
c. objective of environmental management plan;
d. environmental management;
e. environmental management location;
f. environmental management period;
g. financing environmental management; and
h. environmental management institution.

(3) In terms of site monitoring for nuclear reactor aside from the implementation of environmental monitoring plan and environmental monitoring plan as stipulated in article 2, site monitoring is performed to the site capability to receive heat removal during operation stage.

Article 8

Further requirements on methods and scope of site monitoring are regulated by a Chairman of BAPETEN Regulation.

Part Three
Design and Construction

Article 9

(1) The construction of nuclear installation shall be performed by the licensee based on the design that meets the basic principles for nuclear safety.
(2) The basic principle of nuclear safety as stipulated in paragraph 1 consist of:
a. inherent safety
b. multiple barriers;
c. safety margin;
d. redundancy;
e. diversity;
f. independency;
g. fail-safe; and
h. equipment qualification.

Article 10

(1) The licensee shall ensure the fulfillment of the design requirements from the construction up to the decommissioning stage.
(2) Design requirements as stipulated in paragraph 1 consist of general and specific requirements of design.

Article 11

General design requirements as stipulated in Article 10 paragraph 2 consist of design of:

a. reliability of structure, system, and component;
b. operability, capable to be inspected, maintainability, and testability;
c. nuclear emergency preparedness and response;
d. capable to be decommissioned;
e. radiation protection;
f. the human factor; and
g. ageing management.

Article 12

(1) Specific design requirements as stipulated in Article 10 paragraph 2 consist of:
    a. Specific design requirements for nuclear reactor; and
    b. Specific requirements for Nonreactor nuclear installation.
(2) Specific design requirements for Nuclear reactor as stipulated in paragraph 1 letter a consist of at least design of:
    a. reactor core;
    b. heat removal system;
    c. shutdown system;
    d. reactor protection system;
    e. technical safety feature;
    f. containment system;
    g. instrumentation and control system;
    h. handling and storage of nuclear fuel system;
    i. radioactive waste management system; and
    j. auxiliary system.
(3) Specific design requirements for nonreactor nuclear installation as stipulated in paragraph 1 letter b consist of design of:
    a. nuclear material handling and storage system;
    b. fabrication system;
    c. process system;
    d. protection and interlock system;
    e. alarm system;
    f. electrical power supply system;
    g. water supply system;
    h. air supply system;
    i. steam supply and distribution system;
    j. cooling system;
    k. communication system; and/or
    l. fire and explosion protection system.

Article 13

(1) To meet the general requirements and specific requirements of a design as stipulated in Article 10 of paragraph 2, licensee shall establish the classification of structure, system, and component of a nuclear installation.
(2) Classification as stipulated in paragraph 1 is implemented based on the safety class, qualification class and/or seismic class.

Article 14

(1) The Licensee shall perform construction as stipulated in Article 9 paragraph (1) in accordance to the construction program.
(2) The construction program as stipulated in paragraph (1) consists of:
    a. procedure and schedule of construction implementation;
    b. functional testing procedure;
    c. hold point;
    d. design acceptance criteria; and
    e. documentation and report.
(3) The implementation of functional testing procedure as stipulated in paragraph (2) letter b consists of testing of:
    a. each function of structure, system, and component without nuclear material; and
    b. integration all systems without nuclear material.

Article 15

(1) Licensee may perform design changes during construction of nuclear installation to:
    a. enhance the safety of nuclear installation;
    b. prevent identified failure during construction of nuclear installation; and/or
    c. enhance the maintainability of nuclear installation.
(2) Design changes that can be performed by the licensee consist of design changes that:
    a. affect the structure, system, and component that are important to safety; and
    b. do not affect the structure, system, and component that are important to safety.
(3) Structure, system, and component that are important to safety as stipulated in paragraph (2) letter a consist of:
    a. structure, system, and component that prevent the radiation exposure to the workers, public, and environment;
    b. structure, system, and component that prevent an anticipated operational occurrence to become an accident condition; and
    c. features that are available to mitigate consequences of function deviation or failure of structure, system, and component.
(4) Before performing design changes as stipulated in paragraph (2) letter a, licensee shall obtain the approval of Chairman of BAPETEN.
(5) If the implemented design changes do not affect structure, system, and component that are important to safety as stipulated in paragraph (2) letter b, licensee shall give written notification to Chairman of BAPETEN.

(6) Process and requirements obtaining an approval of the design changes as stipulated in paragraph 4 are governed by the government regulation on licensing of nuclear installations.

Article 16

Further regulation on requirements and assessment of design are further regulated by a Chairman of BAPETEN Regulation.

Part Four
Commissioning

Article 17

(1) The Licensee shall establish and implement a commissioning program to ensure installed the structure, system, and component of nuclear installations can function according to its design.
(2) The commissioning program as stipulated in paragraph (1) shall consist of integrated design testing for all system with the nuclear material.
(3) During the testing as stipulated in paragraph (2), the licensee performs verification to establish operational limits and conditions according to general design requirements and specific design requirements.

Article 18

(1) The Licensee shall establish ageing detection plan of structure, system, and component before starting the commissioning activity.
(2) The ageing detection plan as stipulated in paragraph (1) is performed through the related collection and analysis of data of the structure, system, and component ageing since starting the commissioning activity.

Article 19

Further detail regulation on the commissioning is regulated by the Chairman of BAPETEN Regulation.

Part Five
Operation

Article 20

In the implementation of nuclear installation operation, the licensee shall establish:
a. operational limits and conditions;
b. operation procedure;
c. maintenance, surveillance, and inspection program; and
d. ageing management program.

Article 21

(1) The licensee shall establish operational limits and conditions as stipulated in Article 20 letter a, according to testing and commissioning.
(2) Operational limits and conditions as stipulated in paragraph (1) consist of:
    a. safety limit;
    b. limiting safety system setting;
    c. limits and conditions for normal operation;
    d. surveillance requirements; and
    e. administrative requirements.
(3) The licensee shall perform nuclear installation operation according to the operational limits and conditions as stipulated in paragraph (2).

Article 22

(1) The Licensee shall establish and perform operation procedure as stipulated in Article 20 letter b in all nuclear installation conditions.
(2) Nuclear installation conditions as stipulated in paragraph (1) consists of:
    a. normal operation;
    b. anticipated operational occurrence; and
(3) design basis accident and beyond design basis accident.

Article 23

The licensee shall establish and perform the maintenance, surveillance, and inspection program as stipulated in Article 20 letter c for every structure, system, and component important to safety.

Article 24

The licensee shall ensure that operation, maintenance, surveillance, and inspection of nuclear installation are performed by trained and/or qualified personnel that are according to related regulations.

Article 25

(1) The licensee shall submit reports to the Chairman of BAPETEN on:
    a. nuclear installation operation; and
    b. implementation on environmental management plan and environmental monitoring plan.
(2) Submitting the report as stipulated in paragraph (1) is performed by the licensee periodically.

Article 26

(1) The licensee shall establish and implement ageing management program as stipulated in Article 20 letter d on critical structure, system, and component.
(2) The licensee shall perform periodical evaluation at the ageing management program as stipulated in paragraph (1).

Article 27

(1) During the implementation of nuclear installation operation, the licensee shall obtain the approval of Chairman of BAPETEN in terms of performing utilization that:
   a. is not written in safety analysis report;
   b. is affecting the safety of nuclear installation; or
   c. is changing the operational limits and conditions.
(2) To obtain approval as stipulated in paragraph (1), the licensee shall perform safety analysis.
(3) Safety analysis as stipulated in paragraph (2) shall consist at least:
   a. utilization reasons and justification;
   b. hazard potential analysis due to utilization;
   c. radiology and nonradiology impact analysis during the utilization performance and during the functional testing after the utilization; and
   d. measures to reduce potential hazard due to utilization.

Article 28

Licensee of commercial power reactors shall not perform any experiment during operation.

Article 29

Further detail regulation on operation shall be stipulated by the Chairman of BAPETEN Regulation.

Part Six
Modification

Article 30

(1) The licensee may perform modification during the commissioning and operation stage of nuclear installation to:
   a. enhance the safety of nuclear installation;
   b. prevent the identified failures during the nuclear installation commissioning and operation;
   c. comply with the regulations;
   d. reduce the human error probability;
   e. be capable to maintain nuclear installation; and/or
   f. improve the performance of nuclear installation.
(2) In performing the modification as stipulated in paragraph (1) letter a, letter b, and letter c, the licensee shall temporarily terminate the nuclear installation commissioning and operation activity.
(3) The licensee who will perform modification as stipulated in paragraph (1) shall obtain the approval of the Chairman of BAPETEN if the modification:
   a. is causing changes in the operational limits and conditions;
   b. is affecting the structure, system, and component important to safety; or

c. could introduce hazards that have not previously addressed in the safety analysis report.

(4) To obtain the approval as stipulated in paragraph (3), the licensee shall:
   a. Submit a modification program that consists of at least safety analysis and detailed design modification; and
   b. Submit management system document for modification.

Article 31

(1) The licensee shall perform functional testing after finishing modification to assure the function of structure, system, and component of nuclear installation comply with the modification program.
(2) In terms of the result of functional testing as stipulated in paragraph (1) is not in compliance with the modification, the licensee shall perform analysis to obtain the cause of non conformances and perform measures to correct non conformances.
(3) In terms of the result of the functional testing as stipulated in paragraph (1) is appropriate to modification program, the licensee shall submit report on the result of modification implementation to the Chairman of BAPETEN.
(4) The Chairman of BAPETEN performs review and assessment to the report on the result of the modification implementation.
(5) If the result of the modification implementation is appropriate to the modification program, the Chairman of BAPETEN declares the licensee may start to operate the nuclear installation.
(6) If the result of the modification is not appropriate to the modification program, the Chairman of BAPETEN instructs the licensee to perform corrective actions of the implementation of modification.

Article 32

The Licensee shall ensure the safety of nuclear installation during and after the implementation of modification.

Article 33

Further detail regulation on the modification shall be stipulated by the Chairman of BAPETEN Regulation.

Part Seven
Decommissioning

Article 34

(1) The Licensee shall perform decommissioning program at the decommissioning stage.
(2) The implementation of the decommissioning program as stipulated in paragraph (1) is performed since characterization up to the final radiation survey.

Article 35

(1) The decommissioning program as stipulated in Article 34 paragraph (1) shall be reviewed and up-dated periodically during the commissioning, operation, and decommissioning stage.
(2) At the review and up-date of the decommissioning program as stipulated in paragraph (1), the licensee should consider at least:
    a. structure, system, and component changes during the operation of nuclear installation;
    b. anticipated operational occurrence and/or accident occuring during commissioning and operation of nuclear installation;
    c. decommissioning fee; and
    d. latest technology related to decommissioning.

Article 36

Further detail regulation on the decommissioning is stipulated by the Chairman of BAPETEN Regulation.

Part Eight
Safety verification and assessment

Article 37

The licensee shall perform safety verification and assessment during construction, commissioning, and operation stage of nuclear installation.

Article 38

Safety verification as stipulated in Article 37 shall be performed through analysis and surveillance that consist of:
a. implementation of management system at every stage of activity;
b. design confirmation by an independent team;
c. review of the site-related factors;
d. surveillance that is performed continuously during the commissioning and operation of a nuclear installation including environmental monitoring of nuclear installation; and
e. assessment to the necessity of modification and its control.

Article 39

Safety assessment as stipulated in Article 37 shall be performed periodically and cover assessment to the:
a. nuclear installation design;
b. latest condition on structure, system, and component;
c. qualification of equipment;
d. ageing;
e. safety performance and lesson learned on operation experience;

f. safety management and nuclear emergency preparedness program; and
g. radiological impact on the environment.

Article 40

(1) The Licensee shall establish an independent safety assessment committee during the commissioning, operation, and decommissioning stage.
(2) The member of safety assessment committee as stipulated in article (1) shall be qualified and competent related to commissioning, operation, and/or decommissioning.
(3) The member of safety assessment committee as stipulated in article (1) comes from within or outside the organization of the licensee.
(4) The member of the safety assessment committee as stipulated in article (3) shall not come from the work units that are directly related to commissioning, operation, and/or decommissioning.

Article 41

The safety assessment committee as stipulated in Article 40 shall perform assessment and provide recommendation at least on:

a. Operation and monitoring of personnel, work place, and environmental radiation;
b. Structure, system, and component of modification;
c. Changes in the operational limits and conditions;
d. Violation to the operational limits and conditions, license condition, and procedure that affect safety;
e. Procedure and procedure changes that affect safety;
f. Anticipated operational occurrence, design basis accident, and beyond basis design accident;
g. Testing and testing changes to the structure, system and component;
h. Experiment and experiment changes; and
i. Periodical review to the operation and safety of nuclear installation.

Article 42

Further detail requirements on verification and Safety assessment are regulated by a Chairman of BAPETEN Regulation.

CHAPTER III
TECHNICAL REQUIREMENTS OF NUCLEAR INSTALLATION SECURITY

Part One
General

Article 43

(1) Technical requirements of Nuclear installation security as stipulated in Article 3

letter b consists of requirements related to :
a. safeguards; and
b. physical protection.

(2) Requirements of Safeguards and physical protection as stipulated in Paragraph (1) are performed during:
a. site monitoring before design and construction;
b. design and construction;
c. commissioning and operation;
d. safeguards changes and physical protection system;
e. security evaluation; and
f. decommissioning.

Part Two
Site Monitoring before Design and Construction

Article 44

(1) During site monitoring before design and construction, the Licensee in performing safeguards shall:
a. submit declaration on general plan of the development of nuclear fuel cycle, research, and development that are related to the nuclear fuel cycle; and
b. arrange preliminary design information questionnaire.

(2) During the site monitoring before design and construction, the Licensee in performing physical protection shall establish local design basis threat that is based on the national design basis threat.

(3) The arrangement and establishment of the national design basis threat are performed based on related legislation.

Article 45

Further detail requirements on the process of safeguards and physical protection system of nuclear installation and Material during the site monitoring before design and construction are regulated by a Chairman of BAPETEN Regulation.

Part Three
Design and Construction

Article 46

(1) During the design and construction stages, the Licensee in performing safeguards shall:
a. submit declaration of import of nuclear-related special equipments and material; and
b. develop the design information questionnaire.

(2) During the design and construction stages, the Licensee in performing physical

protection shall establish and perform physical protection system that consists of:
a. facility vulneralibility assessment;
b. physical protection plan;
c. physical protection system characteristic;
d. communication path control;
e. access control; and
f. functional testing of physical protection system.

(3) Licensee, in establishing and performing physical protection plan as stipulated in paragraph (2) letter b, shall:
a. classify nuclear materials that are used, stored, and transported;
b. be based on local design basic threat according to nuclear material classification and location; and
c. apply the defense in depth concept for prevention and protection measures.

(4) Nuclear material classification as stipulated in paragraph (3) letter a consists of:
a. nuclear material class I;
b. nuclear material class II;
c. nuclear material class III; and
d. nuclear material class IV.

(5) Further requirements on the details of nuclear material Classification are regulated by the Chairman of BAPETEN Regulation.

Article 47

Licensee shall perform functional testing of physical protection System before receiving the nuclear material at site.

Article 48

(1) Licensee shall implement and maintain the physical protection system of nuclear installation since construction stage up to decommissioning stage.

(2) In implementing and maintaining the physical protection system as stipulated in paragraph (1), licensee establishes and performs procedures to ensure security control in every threat condition.

Article 49

Further detail requirements on implementation of safeguards and physical protection system during design and construction are stipulated by the Chairman of BAPETEN Regulation.

Part Four
Commissioning and Operation

Article 50

(1) Licensee in performing safeguards since commissioning until transfer of nuclear material from the site shall:

a. have record and report system of nuclear material inventory;
b. submit report on the existence of nuclear material to the Chairman of BAPETEN; and
c. submit declaration of additional protocol to the Chairman of BAPETEN;

(2) Licensee shall submit report on the implementation of physical protection system to the Chairman of BAPETEN periodically;

(3) During the commissioning and operation phase, the licensee in implementing the physical protection shall establish and perform:
a. functional testing of the integrated physical protection system;
b. contingency testing; and
c. coordination with the response team.

(4) Licensee shall perform training and/or drill of the physical protection system periodically during commissioning, operation, and decommissioning.

Article 51

Further detail requirements on the implementation of safeguards and physical protection system during commissioning and operation are stipulated in the Chairman of BAPETEN Regulation.

Part Five
Changes to the Safeguards and Physical Protection System

Article 52

(1) Licensee shall perform up-date of the design information questionnaire should there is a change in the safeguards data.

(2) Design information questionnaire as stipulated in paragraph (1) shall be submitted to the Chairman of BAPETEN.

Article 53

(1) Licensee may perform changes in the physical protection system that consist of:
a. design basis threat;
b. physical protection system organization and personnel;
c. classification of nuclear material;
d. procedures related to physical protection;
e. design and separation of physical protection areas ~~fields~~;
f. detection system;
g. physical barrier system;
h. necessary access system;
i. communication system;
j. maintenance and surveillance;
k. contingency plan; and
l. documentation.

(2) Licensee shall report changes in the physical protection system as stipulated in

paragraph (1) to the Chairman of BAPETEN.

(3) Licensee who shall perform changes to the physical protection system that are related to the changes of basis design threat and/or classification of nuclear material during commissioning and operation shall obtain approval from the Chairman of BAPETEN.

Article 54

(1) To obtain the approval as stipulated in Article 53 paragraph (3), licensee shall submit plan on changes to the physical protection system and its reasons to the Chairman of BAPETEN.
(2) Licensee shall perform functional testing after the changes of the physical protection system to ensure the achievement of the objective.
(3) In terms of the functional testing as stipulated in paragraph (2) does not meet the objective of the changes of the physical protection system, the licensee shall identify the cause of non-conformances and perform measures to correct non conformances.
(4) In terms of functional testing as stipulated in paragraph (2) meets the objective of changes of the physical protection system, the licensee shall submit report on the implementation of changes to the physical protection system to the Chairman of BAPETEN.

Part Six
Security Evaluation

Article 55

Security Evaluation consists of:
a. evaluation of the safeguards system; and
b. evaluation of the local design basis threat and physical protection.

Article 56

(1) Licensee shall perform evaluation on the safeguards system periodically.
(2) Result of the evaluation of the safeguards system as stipulated in paragraph (1) shall be reported to the Chairman of BAPETEN.

Article 57

(1) Licensee shall perform evaluation on the local basis design threat and physical protection system periodically.
(2) Result of the evaluation of the local design basis threat and the physical protection system as stipulated in paragraph (1) shall be reported to the Chairman of BAPETEN.
(3) In terms of the result of the evaluation as stipulated in paragraph (2) indicates changes to the previous local design basis threat and nuclear material classification, licensee shall perform changes to the physical protection system.

Part Seven
Decommissioning

Article 58

(1) At the decommissioning stage, after transfer the nuclear material from the nuclear installation site, the licensee shall:
   a. submit declaration on the nuclear-related special equipment and material to the Chairman of BAPETEN; and
   b. ensure the physical protection of the nuclear installation, nuclear-related special equipment and material.
(2) Obligation as stipulated in paragraph (1) is performed by the licensee until the radioactive release approval is obtained from the Chairman of BAPETEN.

Article 59

Further detail requirements on the implementation of safeguards and physical protection of nuclear installation and material during decommissioning are stipulated in a Chairman of BAPETEN Regulation.

CHAPTER IV
MANAGEMENT OF SAFETY AND SECURITY OF NUCLEAR INSTALLATION

Part One
General

Article 60

Safety and security management of nuclear installation as stipulated in Article 3 letter c consist of:
a. responsibility of licensee;
b. management system; and
c. human factor.

Part Two
Responsibility of the Licensee

Article 61

(1) In implementing the requirements of safety and security of nuclear installation, the licensee is responsible in:
   a. achieving the safety and security objective;
   b. establishing and performing policy according to the safety and security objective;
   c. determining the safety and security criteria;
   d. assuring the safety and security in utilizing the nuclear material;
   e. establishing, performing, and developing internal procedures and internal

provisions to ensure safety and security;
f. creating an organization with tasks, authorization, responsibility, and clear communication path;
g. establishing and ensuring that the personnel have the appropriate competency and skills according to their tasks; and
h. performing evaluation, monitoring, and periodically auditing all items related to safety and security.

(2) Responsibility in achieving the safety objective as stipulated in paragraph (1) letter a is performed through an effective defense measure towards the radiation hazard that is caused by the nuclear installation by applying multiple barriers principle to fulfill the basic safety function of nuclear installation.

(3) Responsibility in achieving the security objective of nuclear installation as stipulated in paragraph (1) letter a is performed through:
a. prevention to the diversion of the utilization nuclear material from its peaceful purposes; and
b. response to the unauthorized removal of nuclear material and sabotage of nuclear installation and material.

Part Three
Management System

Article 62

(1) Licensee shall establish and implement the management system for safety and security of the nuclear installation.

(2) The management system as stipulated in paragraph (1) consist of at least:
a. safety and security culture;
b. grading and documentation;
c. management responsibility;
d. resource management;
e. process implementation; and
f. effectivity measurement, review, and correction possibility.

(3) Licensee shall perform evaluation to the management system as stipulated in paragraph (2) periodically according to the type of nuclear installation.

Article 63

Further detail the management system are regulated in a Chairman of BAPETEN Regulation.

Part Four
Human Factor

Article 64

(1) Licensee in ensuring the human factor as stipulated in Article 60 letter c shall

perform:
a. human realibility analysis; and
b. education and training program.

(2) In implementing the human realibility analysis as stipulated in paragraph (1) letter a, the licensee shall consider:
a. qualification of the personnel that will be working in the nuclear installation;
b. healthy factor;
c. task analysis; and
d. ergonomy and human-machine interface factor.

(3) In implementing the education and training program as stipulated in paragraph (1) letter b, licensee shall establish qualification, competency, and level of skills of the personnel who perform from site monitoring up to decommissioning.

CHAPTER V
NUCLEAR EMERGENCY PREPAREDNESS AND RESPONSE

Part One
General

Article 65

Nuclear emergency preparedness and response consist of:
a. Nuclear emergency preparedness;
b. Nuclear emergency; and
c. Nuclear emergency response.

Part Two
Nuclear Emergency Preparedness

Paragraph 1
General

Article 66

(1) Nuclear emergency preparedness as stipulated in article 65 letter a consists of:
   a. nuclear emergency preparedness at the installation level;
   b. nuclear emergency preparedness at the province level; and
   c. nuclear emergency preparedness at the national level.
(2) Nuclear emergency preparedness as stipulated in paragraph (1) is performed based on the nuclear emergency preparedness program.
(3) Nuclear emergency preparedness program as stipulated in paragraph (2) is developed by:
   a. Licensee, for the nuclear emergency preparedness program at the installation level;
   b. Chairman of RDMA province, for nuclear emergency preparedness program at the province level; and
   c. Chairman of NDMA, for nuclear preparedness program at the national level.
(4) In terms of developing of nuclear emergency preparedness program at the province level as stipulated in paragraph (3) letter b, Chairman of RDMA province coordinates with the licensee, BAPETEN, and other related institutions.
(5) Nuclear emergency preparedness program at the province level as stipulated in paragraph (3) letter b is part of the province disaster preparedness response program.
(6) In developing the nuclear emergency preparedness program at the national level as stipulated in paragraph (3) letter c, Chairman of NDMA coordinates with the licensee, BAPETEN, and other ministries and/or non-ministrial institutions.
(7) Nuclear emergency preparedness program at the national level as stipulated in paragraph (3) letter c is part of the national disaster preparedness response program.
(8) Nuclear emergency preparedness program as stipulated in paragraph (3) is developed consistently, not in contradiction, and be based on the categorization of radiological hazard.
(9) Categorization of radiological hazard potential as stipulated in paragraph (8) consists of at least:
   a. Category I;
   b. Category II; and
   c. Category III.

Article 67

(1) Nuclear emergency preparedness program consists of infrastructure elements and response functions.
(2) The infrastructure elements consist of at least:
   a. organization;
   b. coordination;
   c. facility and equipments including the early warning and alarm equipments;
   d. response procedures; and

e. nuclear emergency training and drill.

(3) The response functions consist of at least:
   a. identification, report, and activation;
   b. mitigation measures;
   c. immediate protection measures;
   d. protection measures for personnel of nuclear emergency response, workers, public, and environment; and
   e. providing information and instruction to the public.

(4) Further detail regulation on the developing of nuclear emergency preparedness program is stipulated by a Chairman of BAPETEN Regulation.

Paragraph 2
Nuclear Emergency Preparedness At The Installation Level

Article 68

Nuclear emergency preparedness at the installation level as stipulated in Article 66 paragraph (1) letter a shall be performed by the licensee based on the nuclear emergency preparedness program at the installation level.

Article 69

To ensure that the nuclear emergency preparedness at the installation level can be carried out, the licensee shall implement nuclear emergency training and drill as stipulated in Article 67 paragraph (2) letter e at the installation level of at least once in a year.

Paragraph 3
Nuclear Emergency Preparedness at the Province Level

Article 70

Nuclear Emergency Preparedness at the province level as stipulated in Article 66 paragraph (1) letter b is coordinated by the Chairman of NDMA at the province level and is carried out together by the licensee and related government institutions based on nuclear emergency preparedness program at the province level.

Article 71

(1) The Chairman of RDMA at the province level coordinates the nuclear emergency training and drill as stipulated in Article 67 paragraph (2) letter e according to the nuclear emergency program at the province level.
(2) Licensee and related institutions shall participate in nuclear emergency training and drill as stipulated in paragraph (1).
(3) Nuclear emergency training and drill are carried out at least once in 2 (two) years.

Paragraph 4
Nuclear Emergency Preparedness At The National Level

Article 72

National nuclear emergency preparedness as stipulated in Article 66 paragraph (1) letter c is coordinated by the Chairman of NDMA and carried out by the licensee and related ministries and/or non-ministrial institutions according to the nuclear emergency program at the national level.

Article 73

(1) The Chairman of NDMA coordinates the nuclear emergency training and rehearsal as stipulated in Article 67 paragraph (2) letter e according to nuclear emergency preparedness program at the national level.
(2) Licensee and related ministrial and/or non-ministrial institution are obligated to participate in the nuclear emergency training and drill as stipulated in paragraph (1).
(3) Nuclear emergency preparedness training and drill are carried out at least once in 4 (four) years.

Part Three
Nuclear Emergency

Article 74

Nuclear emergency as stipulated in Article 65 letter b consists of:
a. nuclear emergency at the installation level;
b. nuclear emergency at the province level; and
c. nuclear emergency at the national level.

Article 75

(1) Nuclear emergency at the installation level as stipulated in Article 74 letter a is determined if there is a beyond basic design condition.
(2) If such condition as stipulated in paragraph (1) occurs, licensee declares nuclear emergency status at the installation level.

Article 76

(1) Nuclear emergency at the province level as stipulated in Article 74 letter b is determined if such condition occurs:
    a. dose rate of 5 Sv/hour (five micro sievert per hour) or more that is measured for 10 (ten) minutes or more at the installation site boundary; and/or
    b. abnormal radioactive release with airborne activity concentration equal to or exceed the dose rate of 5 Sv/hour (five micro Sievert per hour) at installation site boundary that is detected at the normal release path.

(2) In terms of condition as stipulated in paragraph (1), the governor declares nuclear emergency status at the province level based on the recommendation of the Chairman of BAPETEN.

Article 77

(1) Nuclear emergency at the national level as stipulated in Article 74 letter c is determined if such condition occurs:
   a. dose rate of 500 Sv/hour (five hundreds micro Sievert per hour) or more that is measured for 10 (ten) minutes or more at installation site boundary; and/or
   b. abnormal radioactive release with air activity concentration equal to or more than dose rate of 500 Sv/hour (five hundreds micro Sievert per hour) at at installation site boundary that is detected from the normal release path.

(2) If a condition as stipulated in paragraph (1) occurs, the President declares the status of nuclear emergency at the national level based on the recommendation of the Chairman of BAPETEN.

Part Four
Nuclear Emergency Response

Paragraph 1
General

Article 78

(1) Nuclear emergency response as stipulated in Article 65 letter c consists of
   a. nuclear emergency response at the installation level;
   b. nuclear emergency response at the province level; and
   c. nuclear emergency response at the national level.

(2) Nuclear emergency response consist of activities:
   a. nuclear emergency identification, determination of nuclear emergency status, response level, reporting to related institutions, and activation of nuclear emergency response team;
   b. measures to limit or reduce radiation impact, radiation exposure condition, and/or contamination should a nuclear emergency occurs;
   c. measures in giving temporary shelter, evacuation, and/or iodine tablets;
   d. providing radiation protection equipments, monitoring of received radiation dose and control of radioactive material contamination within acceptable limit, measures for response team receiving overexposure, and giving instruction not to consume radioactive material contaminated food; and/or
   e. providing information and instruction to workers and public in the site vicinity fast and timely manner and providing information to the media.

(3) In implementing the nuclear emergency response, licensee shall prioritize to human safety.

Article 79

Nuclear emergency response activities is performed according to nuclear preparedness program.

Paragraph 2
Nuclear Emergency Response at the Installation Level

Article 80

(1) If such nuclear emergency condition at the Installation Level as stipulated in Article 75 occurs, licensee shall perform nuclear emergency response activities at the installation level.
(2) Implementation of the response activities as stipulated in paragraph (1) shall be reported by the licensee in writing and everyday to the Chairman of BAPETEN until the end of the nuclear emergency status at the installation level.

Paragraph 3
Nuclear Emergency Response At The Province Level

Article 81

(1) If such nuclear emergency condition at the province level as stipulated in Article 76 occurs:
    a. The chairman of NDMA Province initiates and leads the implementation of nuclear emergency response activities; and
    b. Licensee shall participate in the implementation of nuclear emergency response.
(2) The mechanism for the nuclear emergency response at the province level is performed according to the related legislation.

Article 82

(1) The governor declares the end status of nuclear emergency response at the province level.
(2) Nuclear emergency response at the province level as stipulated in paragraph (1) is declared to be ended by the governor based on Recommendation of Chairman of BAPETEN.
(3) If such nuclear emergency response as stipulated in paragraph (2) has ended, the governor declares the end status of nuclear emergency at the province based on a written recommendation by the Chairman of BAPETEN.

Paragraph 4
Nuclear Emergency Response At The National Level

Article 83

(1) If such nuclear emergency condition as stipulated in Article 77 occurs:
    a. Chairman of NDMA initiates and leads the implementation of nuclear emergency

response activities; and

b. Licensee shall participate in the nuclear emergency response.

(2) Mechanism for nuclear emergency response at the national level is performed according to the related legislation.

Article 84

(1) The president declares the end status of nuclear emergency response at the national level.

(2) Nuclear emergency response at the national level as stipulated in paragraph (1) is declared to be ended by the President based on recommendation of Chairman of BAPETEN.

(3) If such nuclear emergency response as stipulated in paragraph (2) has been declared to be ended, the President declares the end status of nuclear emergency status at the national level based on a written recommendation by the Chairman of BAPETEN.

Article 85

If such nuclear emergency at the province level and nuclear emergency at the national level as stipulated in Article 76 paragraph (2) and Article 77 paragraph (2) has been declared to be ended, an environmental reclamation is performed according to related legislation.

Part Five
Special Event

Article 86

(1) If there is Special event, Chairman of BAPETEN will lead the implementation of response measure.

(2) A special event as stipulated in paragraph (1) consists of the existing of :

a. Orphan sources; and

b. Transboundary Release of radioactive material and contamination.

(3) In the implementation of response measures, Chairman of BAPETEN may request any assistance to and/or coordinates with NDMA and/or related institution.

(4) Response measures as a result of a special event are performed according to the technical guidance that is established by the Chairman of BAPETEN.

Part Six
Controlling and Reporting

Article 87

BAPETEN controls to the implementation of nuclear emergency preparedness program that is performed at the installation, province, and national level.

Article 88

(1) Licensee shall report to the Chairman of BAPETEN if there is an anticipated operational occurence~~,~~ design basis accident, and beyond design basis accident;
(2) Report as stipulated in paragraph (1) shall be submitted to the Chairman of BAPETEN verbally as soon as possible within 1 (one) hour and in writing in a period of maximum 2 (two) times ~~in~~ 24 (twenty four) hours since an anticipated operational occurence~~,~~ design basis accident, and beyond design basis accident occur.
(3) Licensee shall report the implementation of an anticipated operational occurrence, design basis accident, and beyond design basis accident at its installation to the Chairman of BAPETEN.

Article 89

Chairman of NDMA together with the Chairman of BAPETEN report the occurrence and activities of nuclear emergency response as stipulated in Article 83 to the President based on the national legislation on disaster response.

Article 90

Chairman of BAPETEN notify the International Nuclear Agency and/or to other governments on the event of nuclear emergency early.

Part Seven
Fund Allocation

Article 91

(1) The province government and the Government allocate budget for nuclear emergency preparedness and response at the province and national level within the Regional Budget Revenue and Expenditure and State Budget Revenue and Expenditure based on a nuclear emergency preparedness program as stipulated in Article 66 paragraph (3).
(2) Licensee shall allocate budget for the nuclear emergency preparedness and response as stipulated in Article 66 paragraph (3) before the nuclear installation commissioning and operation activity are started.
(3) In terms of licensee is a government institution, the budget allocation of nuclear emergency preparedness and response is performed based on national related legislation.

Article 92

Fund expenditure of nuclear emergency preparedness and response is implemented by the Government, provincial government, NDMA, and/or RDMA province according to their responsibilities and functions.

Part Eight

Response Assistance

Article 93

NDMA, Provincial RDMA, and BAPETEN may acquire assistance from the international institutions, other countries, and/or nongovernmental foreign institutions in terms of nuclear emergency response according to national legislation on disaster response.

CHAPTER VI
ADMINISTRATIVE SANCTIONS

Article 94

(1) Chairman of BAPETEN gives administrative sanctions to the licensee if there is a violation towards the safety and security of nuclear installation.
(2) Administrative sanctions as stipulated in paragraph (1) consist of:
    a. written warning;
    b. license suspension; or
    c. license revocation.

Article 96

(1) Licensee that violates the provision as stipulated in Article 27 paragraph (1), Article 30 paragraph (2) and paragraph (3), Article 80 paragraph (1), and Article 88 paragraph (1), is subject to suspension on commissioning or operation license of nuclear installation.
(2) Licensee shall temporarily terminate the commissioning or operation activities of a nuclear installation starting from the date of license suspension of nuclear installation.
(3) License suspension as stipulated in paragraph (1) shall be valid until the fulfillment of requirements of safety and security of nuclear installation.
(4) If licensee meets the requirements of safety and security of nuclear installation as stipulated in paragraph (1), Chairman of BAPETEN withdraws on suspended decommissioning or operation license.
(5) If during the suspension of license, the licensee does not meet the requirements of safety and security of nuclear installation as stipulated in paragraph (1) and continues to perform the commissioning or operation activities of nuclear installation, Chairman of BAPETEN revokes the commissioning or operation license of nuclear installation.

Article 97

Chairman of BAPETEN revokes the commissioning or operation license of nuclear installation if the licensee violates provisions as stipulated in Article 28, Article 78 paragraph (3), Article 81 paragraph (1) letter b, and Article 83 paragraph (1) letter b.

Article 98

In terms of license revocation as stipulated in Article 95 paragraph (7), Article 96 paragraph (5), and Article 97, the licensee shall still be responsible in the management of nuclear installation, nuclear material, and radioactive waste according to related national legislation.

CHAPTER VII
FINAL PROVISIONS

Article 99

This Government Regulation shall come into effect on the date of its enactment.

To provide information, order that this government regulation be published in the State Gazzette of the Republic of Indonesia.

Established in Jakarta
on 23 April 2012
PRESIDENT OF THE REPUBLIC OF INDONESIA,

(signature)

SUSILO BAMBANG YUDHOYONO

Enacted in Jakarta
on April 2012
MINISTRY OF JUSTICE AND HUMAN RIGHTS
REPUBLIC OF INDONESIA,

(signature)

AMIR SYAMSUDIN

STATE GAZETTE OF THE REPUBLIC OF INDONESIA OF 2012 NUMBER 107