NUCLEAR SECURITY DETECTION ARCHITECTURE ON NATIONAL NUCLEAR SECURITY REGULATION – CASE STUDY INDONESIA

Hermawan Puji Yuwana
Nuclear Energy Regulatory Agency of Indonesia (BAPETEN)
e-mail: h.puji@bapeten.go.id

A. BACKGROUND AND GOAL

1. Indonesia is an archipelagic country.
2. BAPETEN has main responsibility to oversee the utilization of nuclear energy utilization through regulation, licensing, and inspection.
3. The oversight of nuclear energy utilization is covering three aspect: safety, security, and safeguards.
4. The challenges on the oversight of nuclear security aspect become a concern both in the national and international levels
5. The regulation for nuclear security in Indonesia already exist, both at the level of government regulations (GR) and BAPETEN chairman regulations (BCR).
6. **This paper aims**: to determine and identify nuclear security architecture detection in national nuclear security regulation in Indonesia.

B. LEGAL FRAMEWORK

Act Nr. 10 Year 1997 on Nuclear Energy

1. GR No. 33 Year 2007 on the Safety Ionizing Radiation and the Security of Radioactive Sources
2. GR No. 54 Year 2012 on the Safety and Security of Nuclear Installation

1. BCR No. 1 Year 2009 on Physical Protection of Nuclear Installation and Nuclear Material
2. BCR No. 6 Year 2015 on the Security of Radioactive Sources

C. DISCUSSION

1. The definition of the security of radioactive source is action to prevent unauthorized access or destruction, and loss, theft, and/or unauthorized removal of radioactive sources.
2. Whilst the definition of nuclear security of nuclear installations is defined as action to prevent, detect, assess, delay, and respond to unauthorized act, transfer of nuclear material, and sabotage of nuclear installations and materials.
3. Nuclear security detection architecture is a framework that integrates the various technical and non-technical elements.
4. Nuclear security detection architecture which is composed of an integrated set of nuclear security systems and measures.
5. However the existing national nuclear security regulations in Indonesia may not describe prescriptively and specifically the concept of nuclear security detection architecture.
6. So, what are considerations developing NSDA?

There are several considerations to support the development of nuclear security detection architecture in Indonesia:

1. The development of a regulatory framework for national detection strategy or nuclear security detection architecture

The development of a regulatory framework could consider the scope and national priorities, threats assessment, and assessment of the selection of nuclear security detection architecture. Threat assessment should be conducted to determine several things such as the amount of nuclear material and radioactive sources, enemy characterization (attributes, abilities, and tactics that can be used), strategic targets and locations, and locations where nuclear material and radioactive sources going in and out.

2. The roles of the competent authorities on nuclear security systems and measures;

The roles of the competent authorities is based on the duties and functions of each competent authority as well as cooperation and coordination mechanism among competent authorities.

3. International cooperation to improve effectiveness related to the detection function.

Poster Ref. Number: 108
International Conference on Nuclear Security: Sustaining and Strengthening Efforts
Vienna, Austria, 10 - 14 February 2020