

Nuclear Security in Indonesia – Batan's Perspective

Regional Training Course on Physical Protection and
Security Management for Research Reactors

Serpong-Indonesia, 29 September – 03 October 2014



batan

Contents

- Introduction
- IPPAS (International Physical Protection Advisory Services) Mission in BATAN
- Development of Nuclear Security in BATAN
- Summary



Contents

- **Introduction**
- IPPAS (International Physical Protection Advisory Services) Mission in BATAN
- Development of Nuclear Security in BATAN
- Summary



BATAN's Research Center



BATAN's Main Facilities

1. 2 MW TRIGA Mark II Reactor Bandung, 1965
 2. Pasar Jum'at, Irradiation facility 1966.
 3. Reactor Kartini, 100 kW, Yogyakarta, 1974
 4. Reactor GA Siwabessy, 30 MW, Serpong, 1987
 5. Secondary Standard Dosimetry Laboratory (SSDL), Batan HQ, Jakarta
- **Total : app. 2800 workforces**



Regulatory Framework on Nuclear Security

- Government Regulation No. 33 / 2007, on ionizing radiation safety and security of radioactive sources
- Government Regulation No. 54 / 2012 on the Safety and Security of Nuclear Installations
- BAPETEN Chairman Regulation No. 7 / 2007, on Security of Radioactive Source
- BAPETEN Chairman Regulation No. 1 / 2009, on Physical Protection of Nuclear Materials and Facilities
- BAPETEN Chairman Regulation No. 1 / 2010, on Emergency Preparedness and Response
- Nuclear Security Act, Draft



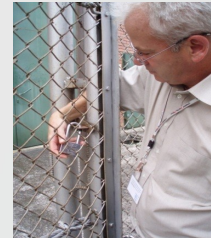
Contents



- Introduction
- **IPPAS (International Physical Protection Advisory Services) Mission in BATAN**
- Development of Nuclear Security in BATAN
- Summary

IPPAS Mission

- Conducted in 2001 and 2007
- Review of legal and regulatory basis for the physical protection of nuclear activities
 - Review of implementation of physical protection in three research reactors
- Outcomes: recommendations, suggestions and good practices
 - Recommendation: design basis threat
 - Suggestion: training in sabotage and vital area analysis
 - Good practice: close link among stake holders



Contents

- Introduction
- IPPAS (International Physical Protection Advisory Services) Mission in BATAN
- **Development of Nuclear Security in BATAN**
- Summary



Upgrading the Security System

- Developed Design Basis Threat (DBT)
- Physical Protection of NM & Security of Radioactive Source:
 - Access control system
 - Video security camera and UPS
- Table Top Exercise (Serpong 2010, Yogyakarta 2012 and Bandung 2013)
- Workshop on Vulnerability Analysis (2012)
- Support from USDOE, SNL, GTRI and others

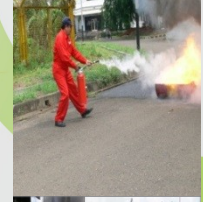


Improving the Security Tasks

- HRD BATAN's Nuclear Facilities Guards:
 - Organizing education and training for staff (PPSM), sending staff to some regional and international events
- Joint training exercise on countering terrorism
 - Conducted annually
 - Involving all stake holders: police, army, fire brigades, radiological first responder unit
 - Theft and sabotage scenario



Joint Training Exercise: 16 items



Experiences in PP during Transport

- BATAN had experienced three times in implementing security during transport of spent nuclear fuel
- Involving related government agencies
 - Police, Special Squad
 - Military as back up
 - Regulatory Body



Nuclear Security Culture

- BATAN has established a program to promulgate PPS & dissemination of nuclear security culture based on NSS No.7 and Bapeten Chairman Regulation No.1/2009
 - BATAN's Leaderships
 - Entire workforces
- To better understanding on nuclear security
- In cooperation with USDOS-CITS/UGA-ORNL



Nuclear Security Culture

- Conduct Self Assessment Trial on Nuclear Security Culture
 - In three research reactors
 - First attempt to test the IAEA Methodology
 - 1035 employee were surveyed and interviewed
 - Involving all level of employee
 - Outcomes for Batan:
 - Baseline for future nuclear security culture evaluation and further improvement
 - Raised security awareness among workforces



Organizational Aspects

- Establishment of Nuclear Security and Physical Protection Division in BATAN's new organization (since 2014):
 - Coordinating all activities in nuclear security and physical protection in BATAN
- BATAN is establishing Center for Security Culture and Assessment:
 - Think tank for development of security culture and its assessment
 - With BATAN's education and training center, developing the program for education and training in nuclear security
 - Cooperation with other national and international institutions

International Cooperation

- IAEA
- CITS (Center for International Trade and Security) – University of Georgia (UGA), USA
- PNS (Partnership for Nuclear Security) / U.S. Department of States
- NNSA (National Nuclear Security Administration) / U.S. Department of Energy
- DECC (Department of Energy and Climate Change), United Kingdom
- ANSTO, Australia
- JAEA (Japan Atomic Energy Authority)

Challenges

- ❖ The Washington Communiqué Work Plan (April 2010):
 - Raised the status of **security culture** to the same level of importance as physical protection and material accountancy
- ❖ The Seoul Communiqué (March 2012):
 - Recognized that investment in human capacity building is fundamental to promoting and sustaining a **strong nuclear security culture**
 - Encouraged states to promote human resource development through **education and training**
- ❖ The Hague Nuclear Security Summit Communiqué (March 2014)
 - Recognized that nuclear security and safety have the common aim of protecting human health, society and the environment. Emphasized the need to develop a **nuclear security culture**, with a particular focus on the **coordination of safety and security**.

Contents



- Introduction
- IPPAS (International Physical Protection Advisory Services) Mission in BATAN
- Development of Nuclear Security in BATAN
- **Summary**

Summary

- BATAN has been developing many aspects of nuclear security and physical protection based on the international development and national needs
 - Recommendations from IPPAS Mission are among the based of that development
- BATAN intends to increase its role on nuclear security, especially in security culture and assessment and education and training
- BATAN welcomes national and international institutions to establish a partnership aimed to increase its role, capability in terms of nuclear security



THANK YOU

