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EXPERIENCES AND LESSONS LEARNED OF INDONESIA'S REGULATORY DEVELOPMENT PROCESS ON SECURITY OF RADIOACTIVE SOURCES

Indonesia has around 7,430 different types of radioactive sources from all categories (based on BAPETEN database, b@lis infara on 16 May 2019). Radioactive sources has beed applied in industries, hospitals, and research centers and it is one of the most urgent and threatening dangers, as it can be used in dirty bomb and other malicious act. Indonesian Nuclear Energy Regulatory Authority (BAPETEN) continuously enhances and improves the quality of its regulations with respect to security of radioactive sources. We have BAPETEN Chairman Regulation No. 6 Year 2015 on Security of Radioactive Sources, which is established and applied in facilities since 2015. Regulatory control must be implemented through development of regulations, reviews and assessment, authorization, inspection and enforcement.

The Analysis of this study is conducted to evaluate the process of formulating and composing BAPETEN Chairman Regulation No. 6 year 2015 on Security of Radioactive Sources. Important objects that are not covered by current regulation will be shared in this study and all the experiences and lessons learned we obtained from it will be explained clearly in this study with the hope that it can be useful for other countries in their regulatory development process.

The Process of formulating and composing the Regulation No. 6 year 2015 on Security of Radioactive Sources was started when the previous regulation needed to be revised in the need of implementing Nuclear Security Series (NSS) No. 11 (2009) and No. 9 (2008), since the previous regulation was composed based on IAEA TEC-DOC 1355 (2003). We were working in team, the members of which had clear understanding in relevant issues to be addressed in this regulation. We also accommodated stakeholder's input in our regulation, and after the final draft was reviewed, we posted the final draft at BAPETEN website to receive input from stakeholders.

The experience we can share in this study is when we tried to regulate the storage facility of industrial gauges with high activities sources and well logging. We have enough resources but we still got confusing in regulating the facility and the storage within the facility (bunker). Finally we decide to regulate the industrial gauges with high activities sources and well logging in the category 3 (have to meet the security level 3 requirement) in accordance with NSS No. 11. However, for the bunker of industrial gauges and well logging sources (the storage facility) need to meet security level 2 requirement because of the aggregation of the source. This was not mention in the NSS No. 11, so we create this because of the condition in the facility.

The lesson learned we gather from this regulation development process is that we realized that some important objects are not covered by current regulation, such as the security level of the aggregation of radioactive sources during transport and facilities with radioactive sources that already decayed, didn't go to a lower security level requirement, and the use of radioactive sources having A/D ratio did not match with the practice based, for example the radioisotope generators for radiopharmaceuticals production in PET scan facility at hospital, had low A/D ratio but it had to follow high security level requirement. This will be our home work for the next revision.

The development of regulations concerning safety, security and safeguards which included planning, drafting, discussion, legitimation, enactment, and dissemination was successfully finalized in 2015. We experienced difficult time in composing the regulation on the storage bunker within the facilities of industrial gauges with high activities sources and well logging, we also learned that some important objects are not covered by current regulation. Therefore we hope our experiences and lesson learn will be useful for other countries in their regulatory development process.

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