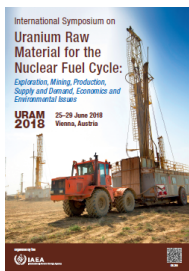


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Uranium Mine Operations in Indonesia

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INTRODUCTION

Mineral and coal mining in Indonesia regulated by Act No. 4 Year 2009 [1]. In the Act, minerals divided into four category which are: rock, metal, non metal, and radioactive minerals. Implementation of the Act regulated in the derivative Government Regulations from Act No. 4 Year 2009 that cope the arrangement of region, business license, and inspection activities. However, arrangement for the radioactive minerals excluded from Act No. 4 Year 2009 on Mineral and Coal Mining, and delegate the arrangement to the Act No. 10 Year 1997 on Nuclear Energy [2]. The term nuclear material mining in Nuclear Energy Act is compatible with term radioactive minerals in Mineral and Coal Mining Act. Currently, Indonesia in the development phase for Government Regulations as implementation of the Act No. 10 Year 1997 on Nuclear Energy for nuclear material mining. It will regulated the detailed arrangement for business, license, and inspection activities.

This paper describe the main idea of arrangement for nuclear material mining, for example uranium mining as the main focused activity in this paper, in the draft of Government Regulations which is in the development phase.

DESCRIPTION

Indonesian government opening up opportunities for parties to running uranium mining business. The interested party, called applicant, can be a National Nuclear Power Agency (BATAN), a state-owned enterprise, a cooperative, or a business entity. The applicant to conduct activities related to uranium business can apply for a Nuclear Mining Permission Mining license to the Nuclear Energy Regulator Agency (BAPETEN). BATAN is a government institution having duties and functions as the nuclear promoting body, and BAPETEN is a government institution that has duties and functions nuclear regulatory body.

There are two major phase for the activities to running uranium mining business, which are:

- General Investigation, Exploration, and Exploitation Phase; and

The initial phase of uranium mining processes is through feasibility study activities based on the results of general investigation and exploration activities. A state-owned enterprise, a cooperative, or a business entities that interested in conducting activities in this phase must cooperate with BATAN.

- Mining Phase

Mining in this context define as a phase of activities that includes excavation, temporary storage, processing, transportation, and sale of nuclear material mining. The party interested in performing this phase activity must meet administrative, technical and financial requirements. The requirement proves to the State, in this case to BAPETEN, that the applicant has the ability to ensure the safety of the workers, the community and the environment of its uranium mining activities.

General Investigation, Exploration, And Exploitation Phase

Furthermore for the initial phase, before conducting activities the party shall submit notification to the head of BAPETEN. The information submitted in the notification are:

- map of activity area;

A state-owned enterprise, a cooperative, or a business entities shall obtain a territorial designation and appointment to conduct uranium mining activities from BATAN.

- document of planning program for general investigation, exploration and exploitation activities; and
- cooperation contracts

In the case of general investigation, exploration and exploitation activities carried out by state-owned enterprise, a cooperative, or a business entities cooperating with BATAN.

The Head of BAPETEN conduct verification after receiving the notification, includes:

- verification of documents; and
- field verification.

Based on the verification, the head of BAPETEN provides technical recommendations regarding radiation safety during general investigation activities, and exploration and exploitation take place.

Mining Phase

In the case of uranium mining carried out by state-owned enterprise, a cooperative, or a business entities, the parties should ask for letter of mining appointment (SPP) from the head of BATAN. SPP granted in the territorial designation of uranium mining (WPP) based on the results of general investigation, exploration and exploitation.

Head of BATAN when grant the SPP, give priority and taken into account state-owned enterprise, a cooperative, or a business entities cooperating with BATAN in conducting general investigations, exploration and exploitation. In the case of no state-owned enterprise, a cooperative, or a business entities are not interested continuing to the mining phase, the head of BATAN offer selection to other business entities. The SPP is granted for a maximum period of 20 (twenty) years and can be extended 2 (two) times at the maximum of 10 (ten) years.

The holder of SPP can conduct the activities of uranium mining which includes:

- excavation;
- temporary storage; and
- processing.

Nuclear Mining License Requirement

The applicant for obtaining Nuclear Mining License must submit to the head of BAPETEN and fulfill the requirements:

- Administrative requirements;
- Technical requirements; and
- Financial requirements.

For administrative requirements, applicant should provide evidence of obtaining SPP from head of BATAN, evidence of incorporation of legal entities; and proof of payment of application fee for nuclear mining license.

For technical requirements, applicant should provide the evidence the ability to ensure the safety of the workers, the community and the environment of its uranium mining activities, such as:

- Capable person to conduct activities and maintain safety as the top priority especially radiation protection;
- Tools or equipment for maintain radiation safety;
- Documents that proves applicant well known about the activities conducted, such as: procedures related to the uranium mining activities, document of safety analysis report for uranium mining, document of management system, document program of protection and radiation safety, document of physical protection plan, document of safeguard system, and document of emergency preparedness and response systems;
- Document that proves applicant taken into account the environment conservation, such as: document for handling of radioactive waste, document of closure plan after the end of the activities, a statement of ability to comply with laws and regulations in the field of environmental protection and management; and approval of environmental documents in accordance with the provisions of legislation from ministry of environment and forestry; and
- Local society participation taken into account for SPP.

For financial requirements, applicant should provide the evidence the ability to finance all activities during:

- Maintain operation in the safely condition;
- Conduct remediation in the end of activities.

DISCUSSION AND CONCLUSION

Indonesia received benefit from IAEA activities related to the uranium mining, which are Technical Meeting of the Uranium Mining and Remediation Exchange Group (UMREG) and Workshop on Planning for Remediation of Legacy Sites under the International Working Forum on Regulatory Supervision of Legacy Sites (RSLs). The activities give positive feed back and knowledge that support the development of the regulation. Lesson learnt from other countries and knowledge shared from IAEA expert give constructive feedback to be adopt and implement in Indonesian regulation, such as:

- Environment factor after the end of activities should be considered seriously in the license requirement;

- Even though the project is implemented by government, the responsibility to maintain safety, including environmental factors, during operation and after the end of activities should be demonstrated;

IAEA approach to regulate mining activities described in the guideline at Nuclear Law Handbook [3] also become consideration for developing requirements. Requirements developed to maintain and ensure safety are always implemented in the entire phase of the uranium mining activities, including after the end of activities.

REFERENCES

[1] Indonesian Act No.4 Year 2009 on Mineral and Coal Mining.

[2] Indonesian Act No.10 Year 1997 on Nuclear Energy.

[3] INTERNATIONAL ATOMIC ENERGY AGENCY, Handbook on Nuclear Law: Implementing Legislation, Vienna (2010).

Country or International Organization

Indonesia

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