

ISLAMIC REPUBLIC OF AFGHANISTAN

MINISTRY OF MINES

DIRECTORATE OF POLICY

Radioactive Minerals Mining Policy

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Radioactive Minerals Mining Policy- Draft

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Acronyms

Ppm	Parts per million
AAEHC	Afghan Atomic Energy High Commission
IAEA	International Atomic Energy Agency
MoM	Ministry of Mines
MoIA	Ministry of Interior Affairs
MoF	Ministry of Finance
MoCI	Ministry of Commerce and Industry
NEPA	National Environmental Protection Agency
MoLSAMD	Ministry of Labor, Social Affairs, Martyrs and Disabled
IMC	Inter Ministerial Council
EIA	Environmental Impact Assessment
PPE	Personal Protection Equipment
ARD	Acid Rock Drainage

1. PREAMBLE

Afghanistan hosts deposits of radioactive minerals (i.e. Uranium and Thorium). The government of Afghanistan in its new trend to privatization is looking for developing its valuable resources by keeping the principle of sustainable development in order to overcome post war economy, reduce poverty and create employment for Afghans. The government of Afghanistan recognizes that managing radiation, health and safety, waste and the environment in radioactive minerals mining and processing activities is of paramount importance for the protection of workers, the public and the environment. This recognition and the acceptance of commensurate responsibility are fundamental to vision, values and measures of success of Afghanistan. Such responsible management of radioactive minerals mining and processing projects applies at all stages of planning and activities from exploration through development, construction and operations, and on to decommissioning.

The government of Afghanistan established Atomic Energy High Commission for the purpose of peaceful uses of radioactive minerals, place standards for radiation management, laws and regulation and over sight of radioactive materials activities. The commission in collaboration with the ministry of mines is committed to ensure that all parties directly involved in radioactive minerals mining and processing including operators, contractors, and regulators strive to achieve the highest levels of excellence in these fields of management. The commission is doing so by sustaining a strong safety culture based on a commitment to a framework of common, internationally shared principles. These principles embody best practice and ethical conduct for the entire nuclear industry including radioactive minerals miners, equipment suppliers, service providers, and generators of electricity.

The government is committed to ensure that radioactive minerals and its by-products are managed so as to combine safety, environmental responsibility, sound economic and social acceptability. The government of Afghanistan supports the peaceful uses of nuclear energy for the purpose of security, economic growth, nutrition, medicine, management of on-ground and underground water, nuclear electricity, industry and agriculture etc.

2. OBJECTIVES

The overriding objective of this policy is to support the development of radioactive minerals (i.e Uranium and Thorium) mining and processing activities in Afghanistan in compliance with acceptably high standards, peaceful uses of nuclear energy and export of these materials to the global market with appropriate safeguard and to understand the potential value of these resources to the Afghanistan economy. It also aims a systematic approach to managing the radiation hazards to people and the environment associated with mineral mining activities in areas of known uranium or thorium deposits, and will ensure compliance with AAEHC standards and regulatory requirements of the radiation protection of the country.

3. LEGAL AND REGULATORY FRAMEWORK

The radioactive minerals mining policy is complementary to the National Mining Policy and Metals mining policy. All the provisions of these policies are applicable to the radioactive minerals mining policy. The ministry of mines in collaboration with AAEHC shall establish a suitable regulatory framework for the management and control of radiation, occupational and public health and safety, waste and the environment. The ministry of Mines shall ensure that all activities are authorized by relevant authorities and conducted in full compliance with applicable laws, regulations and requirements, including in particular the Safety Standard Principles of the AAEHC and IAEA.

4. KEY INSTITUTIONAL PLAYERS

The following government organizations are responsible for the administration, oversight, radiation management, security, regulation, fiscal management, revenue collection, environmental management, human resource development, concentration, trade and contract evaluation of the radioactive ore resources.

- Ministry of Mines (MoM)
- Afghan Atomic Energy High Commission (AAEHC)
- Ministry of Interior Affairs (MoIA)
- Ministry of Foreign Affairs (MoFA)
- Ministry of Finance (MoF)
- Ministry of Commerce and Industries (MoCI)
- National Environmental Protection Agency (NEPA)
- Ministry of Labor, Social Affairs, Martyrs and Disabled (MoLSAMD)
- Inter Ministerial Commission (IMC)

As may be deemed necessary, Government may establish, strengthened and/or restructure existing institutions in order to contribute to capacity building and the sound development of the radioactive minerals mining sector.

5. COMMITMENT TO TRANSPARENT OPERATIONS

The exploration, exploitation and processing of radioactive minerals shall be treated no differently from any other mineral commodity, accepting and supporting the AAEHC and IAEA standards for health and safety, radiation management, transportation safeguards and goals of peaceful uses of nuclear power and non-proliferation of nuclear weapons. The ministry of mines supports the conduct of radioactive minerals mining and processing with full adherence to the principles of sustainable development and applies these principles with emphasis on excellence in professional skills, transparency in operations and accountability of management. The ministry of mines advocates that the investments should be financially profitable, technically appropriate, environmentally sound and socially responsible.

6. TECHNICAL OPERATIONS OF RADIOACTIVE MINERALS

Survey, reconnaissance, exploration, exploitation and processing of radioactive minerals shall be conducted by legally licensed operators that are in compliance with the terms and conditions of their mining licenses and international best practices. The operators shall meet the requirements of ministry of mines as well as AAEHC for conducting mining and processing operations of radioactive minerals. The operators shall develop a plan for the management of radiation, health and safety, waste and the environment at all development and operational stages. With the constant goal of avoiding risk and optimizing the use of natural resources and energy, update such plans regularly, and particularly in response to any significant change in activities or site conditions. The mining operators shall prepare a formal Environmental Impact Assessment (EIA) that deals with all questions and concerns related to radiation, occupational and public health and safety, waste and the environment, as well as socio-economic impact. The operators shall be required to provide risk management plans and radiation management plans to the Ministry of Mines.

7. HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION

At all development and operational stages, the mining companies shall ensure adequate protection of employees, contractors, communities, the general public, and the environment, as follows:

a) **Radiation Safety:**

The mining operator shall authorize the introduction of any new practice involving radiation exposure, or the introduction of a new source of radiation exposure within a practice, only if the practice can be justified as producing sufficient benefit to the exposed individuals or to society to offset any potential radiation harm.

The operator shall be required to optimize radiation exposure to as low as reasonably achievable, taking into account all socio-economic factors. Ensure compliance with the occupational and public dose limits laid down by Ministry of Mines and AAEHC. In so doing, classify, according to risk, site personnel and work areas that are subject to radiation exposure. Plan and carefully monitor employee and contractor doses, radioactive discharges and emissions as well as resulting environmental concentrations and exposure rates. A legal framework and infrastructure must address all relevant regulatory aspects of mining and processing legislation.

b) **Personal Protective Equipment:** The operators shall ensure that employees and visitors are provided personal protective equipment (PPE) appropriate for the hazard being controlled and compliant with relevant standards or specifications to control exposure to safe levels determined by AAEHC and relevant international institutions. Ensure that relevant personnel are properly trained on the use and maintenance of this equipment.

c) **Environmental Protection:** Overall, avoid the pollution of water, soil and air; optimize the use of natural resources and energy; and minimize any impact from the site and its

activities on people and the environment. In so doing, include considerations of sustainability, bio-diversity and ecology in guarding against environmental impact.

8. SOCIAL RESPONSIBILITY

At all stages of radioactive minerals mining and processing, the mining company shall properly inform and seek, gain and maintain support from all potentially affected stakeholders, including employees, contractors, host communities, and the general public. Establish an open dialogue with affected stakeholders, carefully consider their views, and provide feedback as to how their concerns are addressed.

9. MANAGEMENT OF HAZARDOUS MATERIALS

Manage and dispose all hazardous materials (radioactive or non-radioactive) including products, residues, wastes and contaminated materials in a manner that is safe, secure and compliant with laws and regulations provided by MoM and AAEHC. The mining companies shall act systematically to establish and implement controls to minimize risks from such wastes and contaminated materials. Control and minimize any radiation releases into the environment, using carefully planned strategies that involve pollution control technologies, robust environmental monitoring, and predictive modelling to ensure that people and the environment remain well protected. Rely where possible on proven, best available, industry scale technologies. Focus particular attention on managing ore stockpiles and such potentially significant sources of contamination as waste rock, tailings, and contaminated water or soils. With tailings, concentrate special effort on the design and construction of impoundments and dams and on the application of a recognized tailings management system for operations, monitoring, maintenance and closure planning.

10. ACCIDENTS AND EMERGENCIES

The mining companies shall identify, characterize and assess the potential for incidents and accidents, and apply controls to minimize the likelihood of occurrence. Develop, implement and periodically test emergency preparedness and response plans. Ensure the availability of mechanisms for reporting and investigating all incidents and accidents so as to identify "root cause" and facilitate corrective actions.

11. TRANSPORT OF HAZARDOUS MATERIALS

Package and transport of all hazardous materials (radioactive and non-radioactive) including products, residues, wastes, and contaminated materials shall be conducted safely, securely, and in compliance with laws and regulations of Afghanistan to a proper place. The transportation of radioactive minerals shall be in compliance with the law, regulations, safety guidelines and standards established by AAEHC. Relevant AAEHC

and IAEA regulations, Safety Guides, applicable international standards, and local legislation shall be applied for transportation of radioactive material.

12. HUMAN RESOURCE DEVELOPMENT

The mining company shall provide systematic training to all site personnel (employees and contractors) in each area of risk, to ensure competence and qualification; include in such training the handling of non-routine responsibilities. Extend such training, where appropriate, to visitors and relevant persons in communities potentially affected by these risks. Regularly review and update this training.

13. SECURITY OF SEALED RADIOACTIVE SOURCES AND NUCLEAR SUBSTANCES

The government shall ensure the security of sealed radioactive sources and nuclear substances, using the chain-of-custody approach where practicable and effective. Comply with applicable laws, national and international standards, and agreements entered into with stakeholders on the safety and security of such sources and substances.

14. FOREIGN TRADE

The export of radioactive products may be conducted only in accordance with the laws, regulations and decisions made by the government of Afghanistan.

15. EFFECTIVENESS OF THE POLICY

Radioactive minerals mining policy is effective as of its approval by the Cabinet and is a complementary documents to the National Mining Policy and Metals Mining Policy on which the Afghanistan radioactive minerals mining companies will operate and from which relevant legal and regulatory acts may be developed. The Policy shall be reviewed from time to time by Ministry of Mines and AAEHC to take cognizance of changes in standards, technology, markets, and any other matters that may arise from its implementation.