

BRAZILIAN NUCLEAR ENERGY COMMISSION

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Mission

Guarantee the peaceful and safe use of nuclear energy; develop and to make available nuclear technologies and similar, aiming the population well-being



THE BRAZILIAN NUCLEAR POLICY

The Brazilian Federal Constitution of 1988 states in articles 21 and 177 that the Union has the exclusive competence for managing and handling all nuclear energy activities, including the operation of nuclear power plants. The Union holds also the monopoly for the survey, mining, milling, exploitation and exploration of nuclear minerals, as well as the activities related to industrialization and commerce of nuclear minerals and materials. The Union is also the ultimate responsible for the safe disposal of radioactive wastes. All these activities shall be solely carried out for peaceful uses and always under the approval of the National Congress.



THE BRAZILIAN NUCLEAR POLICY

The Comissão Nacional de Energia Nuclear (Brazilian National Commission for Nuclear Energy - CNEN) was created in 1956 (Decree 40.110 of 1956.10.10) to be responsible for all nuclear activities in Brazil. Later, CNEN was re-organized and its responsibilities were established by the Law 4118/62 with alterations determined by Laws 6189/74 and 7781/89. Thereafter, CNEN became the Regulatory Body in charge of regulating, licensing and controlling nuclear energy utilization, and the nuclear electric generation was transferred to the electricity government sector.



POLICIES AND PRACTICES

Brazilian practices related to spent fuel and radioactive wastes management are similar to most international practices.

The policy adopted with regard to spent fuel from nuclear power plants is to keep the fuel in safe storage until an international consensus is reached about reprocessing and recycling of the fuel, or a final disposal as such. Therefore, spent fuel is not considered radioactive wastes in the sense of this Convention.

Regarding radioactive wastes, the policy is to keep safely isolated from the environment for time being, while a permanent solution is expected on a national level.



POLICIES AND PRACTICES

The basic legislation governing this policy is the Brazilian Constitution, which establishes in its article 21 that “all the nuclear energy activities shall be solely carried out for peaceful uses and always under the approval of the National Congress”; the Law 6.189 of 16 December 1989, which attributed to CNEN the responsibility for the final disposal of radioactive wastes; and the recent Law n. 10.308 of 20th November 2001 which established rules for the siting, licensing operation and regulation of radioactive waste facilities in Brazil (see also E.2.4).



RADIOACTIVE WASTES

Types and Classification

The waste classification categories utilized in Brazil are the same adopted by the IAEA.

SCOPE OF APPLICATION

DEFINITION OF SCOPE

According to the definition of the Convention and the Brazilian policies and practices described in section B, the activities and facilities covered by this report include all spent fuel and radioactive wastes related to the Brazilian nuclear programme.

Spent fuel is not considered radioactive wastes, pending an international consensus and a national decision about possible reprocessing of this fuel.

SCOPE OF APPLICATION

DEFINITION OF SCOPE

Wastes containing only natural occurring radioactive material will be included in the scope only to the extent that they are produced in the processing of Uranium and Thorium containing ores, such as Monazite sand processing.

So far, there is no spent fuel within the military or defense programme in Brazil. The management of wastes generated in the nuclear submarine programme of the Brazilian Navy, although of minor importance and small quantity.



LEGISLATIVE AND REGULATORY SYSTEM

To implement the obligations of the Convention, Brazil has taken legislative, regulatory and administrative measures to ensure the safety of its nuclear installations, including irradiated fuel and radioactive wastes.

The constitutional principles regarding protection of the environment (Article 225) require that any installation which may cause significant environmental impact shall be subject to environmental impact studies that shall be made public. More specifically, for nuclear facilities, the Federal Constitution provides that Law (Article 225, Paragraph 6) shall approve the siting of the installation.



LEGISLATIVE AND REGULATORY SYSTEM

Therefore, licensing of nuclear installations are subject to both a nuclear licence by CNEN and an environmental licence by the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute for the Environment and Renewable Natural Resources – IBAMA), with the participation of state and local environmental agencies as stated in the National Environmental Policy Act. These principles were established by the Federal Constitution of 1988, at the time that Angra 1 had already been in operation, and Angra 2 was already under construction. Therefore, licensing of these power plants followed slightly different procedures.



LEGISLATIVE AND REGULATORY FRAMEWORK

Brazil has established and maintained the necessary legislative and regulatory framework to ensure the safety of its nuclear installations, including irradiated fuel and radioactive wastes.

As mentioned before, the recent Law n. 10.308 of 20 November 2001 establishes the new legal framework for the solution of the radioactive waste issue in Brazil.



LEGISLATIVE AND REGULATORY FRAMEWORK

The Law confirms Government responsibility for the final destination of radioactive wastes, through the action of CNEN. However, it also opens the possibility for the delegation of the administration and operation of the radioactive waste deposits to third parties.

The Law recognizes 3 types of deposits: initial, operated by the waste generator; intermediate; and final (also called repository). A fourth type of provisional deposit may be established in case of accidents with contamination. Law establishes the rules for site selection, construction and operation, and the licensing and control of the deposits by CNEN.



LEGISLATIVE AND REGULATORY FRAMEWORK

The Law also establishes the financial arrangements for the transfer of the wastes to CNEN and the compensation to the municipalities that accept in their territory the construction of the waste deposits.

Additional regulation related to waste disposal was already issued by CNEN and they are now been revised to conform to the new Law 10.308. These include regulations CNEN-NE-6.05 on Management of Radioactive Waste in Radioactive Installations[6], CNEN-NE-6.06 on Site Selection for Radioactive Waste Deposits, and NN-6.09 on Acceptance Criteria for Deposition of Low and Intermediate Level radioactive Wastes[7].



RESPONSIBILITY OF LICENCE HOLDER

The Brazilian legislation defines the operating organization as the prime responsible for the safety of a nuclear or radioactive installation, including the management of spent fuel and radioactive wastes.

Therefore, to obtain and maintain the corresponding licences, the operating organization, must fulfill all the requirements established in the Brazilian legislation .



General safety requirements

Since the current situation is the storage of spent fuel in the plant pools, the general safety requirements for the management of spent fuel are contained in the safety requirement for siting, design and operation of the nuclear reactors. Regulation CNEN-NE-1.04[3] applies to the fuel stored in the nuclear power plant. Additional requirements are established in Regulation CNEN-NE-1.26[8], for the operational phase, and Regulation CNEN-NE-1.14[5] establishes the necessary reporting requirements.



General safety requirements

General safety requirements for the management of radioactive wastes are established in regulation CNEN-NE-1.04 Licensing of Nuclear Installations[3] and CNEN-NE-6.05. Management of Radioactive Waste in Radioactive Installations[6]. Additional requirements for Nuclear Installation are established in the regulation CNEN -NE- 1.26 Operational safety in Nuclear Power Plants[8].

DISUSED SEALED SOURCES

All the disused sealed sources that are not returned to the manufacturer have been or will be dismantled from its device or shielding, for further disposal of into a repository. Meanwhile, disused sources are stored in provisional deposits at CNEN Institutes.

Thank You

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