

NATIONAL LEGAL REGIME APPLICABLE TO NUCLEAR ACTIVITIES

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Abstract:

This article presents the national legal framework regarding the safe conduct, regulation, authorization and control of nuclear activities on the territory of the Romanian state.

The approach of the topic is not an exhaustive one, but the objective pursued is to draw the general rules that derive from the national legislation in this field. The topic is a topical one, given the fears about nuclear security in the context of an armed conflict near our borders

Keywords: *peaceful use of nuclear energy, nuclear activities, national regulations, nuclear damage, liability.*

1. Introduction

“A discovery, taken as such, is never good or bad, but what is good or bad in reality is just the way people use it” [1] said Karl Winnacker, a famous German physicist, a statement that has remained as current as it is today in the field of nuclear activity.

Natural radioactivity, a component of the environment, is determined by the presence in soil, air, water, vegetation, animal organisms, as well as in humans of naturally occurring radioactive substances of terrestrial origin, naturally existing. To the radiation emitted by these natural sources, cosmic radiation is added. The natural radioactivity of the Earth presents, in the contemporary period, significant changes,

generated by human activities: bringing to the surface of radioactive ores, extraction and use of coal and geothermal waters, etc. [2].

In turn, artificial radioactivity, which appeared especially after the discovery of nuclear fission in 1939, generated extraordinary consequences for humanity, both positive (propulsion engine, nuclear power plant, etc.), but which can be devastating to humans, so as is the case with nuclear weapons.

Radioactive pollution is defined in the literature as “a multilateral and universal aggression, being contaminated all the constituent elements of the environment, air, water, soil, subsoil and, in principle, everything that is alive” [3].

Nuclear explosions, nuclear power plants, nuclear weapons, nuclear-powered ships, medical irradiation, extraction, transportation and processing of radioactive ore, radioactive waste are just some of the main sources of radioactive pollution [4].

The safe management of all sources and types of ionizing radiation is applicable in all aspects of the use of nuclear technologies. In order to protect the environment and the population from the risks that could occur during the exposure to such radiation, standards, limits, principles have been established by legal norms on the basis of which activities in the nuclear field can be carried out.

Nuclear safety is the responsibility of every country that uses nuclear energy. That is why the development of international law has been based on the fundamental principle of national responsibility for the nuclear safety of nuclear installations.

2. General regulatory framework in the field of nuclear activities established by GEO 195/2005 on environmental protection

In our country, the general legal framework in this matter is outlined by the provisions of Chapter VII, entitled Regime of nuclear activities (Art 45-48) of GEO 195/2005 on environmental protection [5].

Within this chapter, the general rules are established on the basis of which the activities in the nuclear field can be carried out in our country, referring also to the special national regulations, as well as to the international ones to which Romania is a party.

In accordance with Art 46 of GEO 195/2005, for carrying out a practice or activity in the nuclear field, the environmental agreement is issued before the issuance of the

authorization by the competent authority for authorization, regulation and control in the nuclear field, and the environmental permit is issued after the issuance of the authorization by the competent authority. In the case of installations with a major nuclear risk – nuclear power plants, research reactors, nuclear fuel plants and final deposits of burned nuclear fuel – the environmental agreement or environmental permit is issued by Government decision, at the proposal of the central authority for environmental protection.

Also, Art 47 lists the main responsibilities of the central public authority for environmental protection in this field, namely: organizing the monitoring of environmental radioactivity throughout the country; supervision, control and taking of the necessary measures in the field of nuclear activities, in order to comply with the legal provisions on environmental protection; the obligation to cooperate with the competent bodies in disaster protection, protection of public health and the environment.

Last but not least, Art 48 of GEO 195/2005 on environmental protection specifies the obligations of authorized natural and legal persons carrying out activities in the nuclear field. These obligations are:

a) to assess, directly or through competent structures, the potential risk, to request and obtain the environmental permit;

b) to apply the procedures and provide the equipment for the new activities, which will allow the achievement of the lowest rational level of radioactivity doses and risks to the population and the environment, and to request and obtain the environmental agreement or environmental permit, as the case may be;

c) to apply, through its own systems, programs for monitoring the radioactive contamination of the environment, which will ensure the observance of the conditions for the elimination of the radioactive substances provided in the authorization and the maintenance of the radioactivity doses within the allowed limits;

d) to maintain in working order the capacity to monitor the local environment, in order to detect any significant radioactive contamination that would result from an accidental disposal of radioactive substances;

e) to promptly report to the competent authority any significant increase in environmental contamination and whether or not this is due to the activity carried out;

f) to continuously verify the correctness of the assumptions made through the probabilistic evaluations regarding the radiological consequences of the radioactive releases;

g) to ensure the storage of radioactive waste, in safe conditions for the health of the population and the environment.

3. The legal regime established by Law no 111/1996 on the safe deployment, regulation, authorization and control of nuclear activities and by Law no 703/2001 on civil liability for nuclear damage

The general provisions of GEO 195/2005 are completed with the provisions of republished Law no 111/1996 on the safe deployment, regulation, authorization and control of nuclear activities [6].

The object of this normative act is the regulation, authorization and control of nuclear activities carried out for exclusively peaceful purposes and other activities that lead to exposure to ionizing radiation, so as to meet the requirements of nuclear safety, radiological safety, protection against ionizing radiation of exposed personnel, patients, the environment, the population and property, with minimal risks, in accordance with regulations and compliance with obligations of the international conventions and agreements to which Romania is a party.

Nuclear activities and the sources to which the provisions of this law apply are listed in art. 2.

Law no 111/1996 prohibits the research, experimentation, development, manufacture, import, export, transit, possession or detonation of a nuclear weapon or any nuclear explosive device on the territory of Romania. The import, export and intra-community transfer to/from Romania of radioactive waste and spent nuclear fuel are also prohibited.

Also, in the content of this special normative act is developed in chapter II (Art 18-24) the authorization regime of the nuclear activities allowed by law, and in chapter III (Art 25-29) are established the obligations that belong to the authorization holder and other natural or legal persons.

The control of nuclear activities is carried out by the National Commission for Nuclear Activities Control (CNCAN). CNCAN is a specialized body of the central public administration, with legal personality, which carries out its activity under the subordination of the Government and under the coordination of the Prime Minister through the General Secretariat of the Government.

According to Art 5 of Law no 111/1996, CNCAN has the competence to issue generally binding regulations and guidelines for detailing the general requirements of nuclear safety, radiological safety, protection against ionizing radiation, on nuclear management systems, control of non-proliferation of nuclear weapons, physical protection, transport of radioactive materials, management of radioactive waste and spent nuclear fuel, planning, preparedness and response to nuclear or radiological emergencies, implementation of products and services for nuclear and radiological installations, and any other regulations necessary for the activity of authorization and control in the nuclear field.

Also, CNCAN is the authority that elaborates the strategy and policy of regulation, authorization and control, as part of the National Strategy for the development of the nuclear field.

The preventive, operational-current and subsequent control of the observance of the relevant legal provisions and of the issued regulations shall be carried out by the representatives of the Commission, namely the proxies, the applicants or the holders of authorizations, in accordance with the provisions contained in Chapter IV, Control regime (Art 30-34).

Failure to comply with the provisions of Law no 111/1996 may lead, on a case-by-case basis, to disciplinary, material, civil, contravention or even criminal liability.

The offenses in this field are the facts cataloged as such by the legislator, listed in Art 44-46 of the law. The most serious crime, punishable by imprisonment from 10 to 25 years and the prohibition of certain rights, is provided by Art 46 and consists of the development, manufacture, possession, import, export, transit or detonation of nuclear weapons or any nuclear explosive devices [7].

In their turn, the facts considered by the legislator to be contraventions are expressly listed in Art 48 of the law, and their finding and application of sanctions is carried

out by the authorized representatives of the National Commission for Nuclear Activities Control.

Regarding civil liability, the legal regime applicable to it is established by Law no 703/2001 on civil liability for nuclear damage, Art 1 stating that “the object of this act is the regulation of civil liability for compensation for damages resulting from the activities of the use of nuclear energy for peaceful purposes” [8].

“Nuclear damage” means, according to Art 3 Let d) of Law no 703/2001:

1. any death or injury;
2. any loss or damage to property;
3. any economic loss resulting from the damage referred to in points 1 and 2, not included in these provisions, if it is suffered by a person entitled to claim compensation in respect of such loss;
4. the cost of measures to restore the environment damaged as a result of a nuclear accident, if such damage is significant, whether such measures are being taken or are to be taken and are not included in point 2;
5. any loss of income arising from an economic interest in any use of the environment due to significant damage to the environment and not included in point 2;
6. the cost of preventive measures and any loss or damage caused by such measures;
7. any other economic damage, other than that caused by the degradation of the environment, if it is permitted by the law on civil liability of the competent court.

The damage referred to in points 1 to 5 and 7 shall be considered nuclear damage to the extent that the loss or damage:

- arises as a result of ionizing radiation emitted by any source of radiation in a nuclear installation or emitted by nuclear fuel, radioactive products or radioactive waste from a nuclear installation or nuclear material from, or sent to a nuclear installation;
- is the result of the radioactive properties of such material or of a combination of radioactive properties with toxic, explosive or other hazardous properties of such material.

In turn, the nuclear accident is defined by law by Art 3 Let as “any fact or succession of facts having the same origin, which causes nuclear damage, and with regard to preventive measures, creates a serious and imminent threat of such damage”.

The conditions under which the operator of a nuclear installation is objectively and exclusively liable for any nuclear damage, if it has been proved to be caused by a nuclear accident, are specified in Art 4 of Law no 703/2001. Also, Art 41 establishes the legal regime applicable to the state's liability for nuclear damage.

Last but not least, the legislator establishes that the right to compensation against the responsible operator is subject to the extinctive prescription. More precisely, this right is prescribed if an action is not filed within 30 years from the date of the nuclear accident, if the action is related to death or injury according to Art 3 Let d) Point 1; respectively 10 years from the date of the nuclear accident, if the action is related to the other nuclear damages according to Art 3 Let d) Points 2-5 and 7, as expressly provided in Art 12 of the law.

Conclusions

Problems with the safe conduct of nuclear activities for exclusively peaceful purposes, so that the conditions for nuclear safety, the protection of exposed personnel, the population, the environment and property are met, with minimal regulatory risks and compliance with the obligations arising from the agreements and the conventions to which Romania is a party, are established by the republished Law no 111/1996. In turn, GEO 195/2005 on environmental protection lays down the general rules on the subject.

Without exhausting the topic, this article highlights the basic rules governing the issue of nuclear activities in Romania in conditions that do not endanger the life, health of people and, in general, the environment.

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