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Legal Provisions for Radioactivity Licenses

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Abstract

The research sheds light on the license issued by the administration to practice radioactive activity and related legal provisions, the license is the administration's tool to impose its control over this important and dangerous activity at the same time, through procedures of authorization (license or registration) The Department may set several requirements and obligations, all of which are restrictions adhered to by the license applicant, through which the Department aims to achieve its objectives in achieving the benefits of radioactivity in various fields with the least possible damage or preventing such damage, especially to the environment and save it from pollution or to workers in this field or to persons.

The research will shed light on the statement of the competent authority to grant the license or authorization and the procedures for granting and the legislator has set restrictions or obligations aimed at protecting the environment from radioactive pollution and people from harm, within the scope of Iraqi law to know the adequacy of legal texts in preventing damage and the best use of this activity.

Keywords: *Licensing, Radioactivity, Environmental Protection, Protection of individuals.*

Introduction

First: Research Introduction

Radioactivity licenses are one of the preventive means in radioactivity that aim to ensure the protection of humans and the environment from the potential harm of practicing this activity, especially in light of the importance of this activity at the present time, its role in the health and agricultural fields, and its importance in the industrial field through improving many industrial products, where it is involved. This activity is used in many industries, including petroleum, chemical, and mineral industries. Therefore, there must be regulation for practicing this activity to reduce its risks. This preventive method was of great importance compared to other therapeutic methods, because preventing risks is better than treating them, especially since the damage resulting from This activity appears tragic for human health and the environment at the moment it occurs and also in the long term because of its spreading, cross-border nature.

Therefore, administrative licensing, as an administrative legal means through which the administrative authority exercises its previous and subsequent control over radioactivity, is thus considered the basic individual preventive measure to achieve the optimal use of

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radioactivity in a way that achieves human well-being and averts the risks resulting from the practice of this activity.

Second: Research importance

The importance of the research appears by examining the adequacy of the legal texts provided by the Iraqi legislator related to regulating the practice of radioactivity, and the suitability of these texts to the reality of the practice of this activity in Iraqi legislation and its treatment of the serious effects that result from the practice of this activity and which affect human health and structure.

Third: The research problem

The problem of the research is that the Iraqi legislator did not address the issue of radioactivity licenses in extended legislation and did not assign the task of granting licenses and monitoring the issue of radioactivity to one administrative body, which may lead to overlapping of the work of the departments. Thus, we are faced with a lack of legislative clarity and may affect the supervisory role in the field of radioactivity. Radioactivity, as a weapon, may be used to an extent that is harmful to the environment and people, and without an administrative license, we do not find in return deterrent penalties that address such dangerous practices. Finally, the Iraqi legislator did not give licenses specific periods that lose their validity upon expiration.

Fourth: Research methodology

In this research, we followed the analytical legal approach to study and analyze legal texts related to the subject.

Fifth: Research structure

To study the legal provisions for radioactivity licenses and the restrictions imposed on them in Iraq, it was necessary to divide this research into: two requirements. We devoted the first requirement to explaining the mechanism for granting radioactivity licenses in two branches, the first to determine the entity granting the licenses, and the second section to the stages of granting the license.

The second requirement will be to study the restrictions on radioactivity licenses in two branches: The first is devoted to restrictions on protecting the environment, while the second is devoted to restrictions on protecting individuals. Finally, we concluded our research with the results we reached and the recommendations we propose.

The first requirement

Mechanisms for granting radioactivity licenses

The issuance of an administrative order granting approval to practice a specific radioactive activity is preceded by several procedures. The desire of the applicant for the license must be expressed in writing, accompanied by the requirements determined by the competent administration for granting the authorization or license. In order to study the mechanism for granting licenses for radioactivity, this must be stated in two sections, the first to determine the entity granting the licenses. The second is for the stages of granting a radioactivity license.

First branch

Licensing body

Before discussing the authorities competent to grant a license to practice radioactivity, it is necessary to know what a license is. A license is defined as “the official permission issued by the competent government authorities to individuals, companies or institutions to practice a specific activity, and this includes permission to start establishing a project or operating an institution or “Practicing a specific profession” (). The license is an official document presented to the owner of nuclear or radiological activity by the

General Authority for Atomic Energy. It specifies the conditions and requirements for the permitted activity, including the activities associated with it such as transportation, storage, and the necessary permits (). The license is issued after a comprehensive assessment of the risks associated with the proposed activity and an evaluation of the economic and environmental feasibility associated with this activity. The license includes conditions and requirements for safety, health and the environment, and specifies its validity period and the obligations that the owner of the activity must fulfill ().

The nuclear license is issued only after conducting careful studies and evaluations of the nuclear and radiological risks associated with the activity to be carried out. The extent of the experience and technical competence of the owner of the activity and those working in this field is determined, and it is ensured that the necessary procedures are in place to deal with any accidents or emergencies so that the General Authority for Atomic Energy can ensure the safety of nuclear or radioactive activity and protect the environment and individuals from any potential danger. This requires the availability of sufficient financial and human resources to implement these procedures and obligations related to the license. In general, the nuclear license is an important tool for regulating nuclear and radiological activity, and determining the responsibilities and obligations related to this activity. The license helps ensure that the permitted activity is carried out safely, efficiently and in compliance with recognized international and local standards.

The license also helps maintain the safety of workers in this field, individuals and the environment from exposure to radiation and pollution of the environment with nuclear and radioactive waste ().

The Iraqi legislator uses the term (authorization) to refer to the licensing and registration procedure and defines it as: “a permit granted by the regulatory body in the form of a document to a legal person who has applied to undertake radiological practice. The authorization may take the form of registration or license” (). The legislator also defined licensing as “approval.” Issued by the Regulatory Authority” (), and we find him once again using the term (authorisation) and defining it as “the authorization granted by the Authority to a natural or legal person to liquidate the nuclear facility after completing the procedures for granting it” ().

We believe that it would have been better for the legislator to leave the issue of setting a definition for the licensing or authorization procedure to administrative jurisprudence and avoid providing a specific definition since legal concepts are subject to change as they are subject to a change in the legal situation in place of the legal text.

The license is issued based on the requirements of the law and regulations for the activity to be practiced. The license also includes certain conditions and requirements that the licensee must adhere to, such as adherence to health, environmental, security and technical standards (). The legislator stipulated that everyone who wishes to practice any form of radioactivity Obtaining the approval of the competent administrative authorities responsible for practicing radioactivity. There is more than one administrative authority in Iraq responsible for supervising and controlling the radiation sector, which are both (the Radiation Protection Center and the Iraqi Authority for Control of Sources of Radioactivity). Whoever wishes to enter the radiological sector must obtain the approval of these bodies collectively in accordance with what was approved by the laws establishing it, or what was stipulated by ().

The purpose of the license is to allow the competent authorities to extend their control over the organization of work in the radiation field in order to protect humans and the environment from the destructive effects of radiation, as well as to enable the competent administration to impose appropriate penalties on the place that violates the instructions, if necessary, when there are reasons. ().

Referring to Iraqi legislation, we find that the legislator has addressed the issue of the entity granting radiation licenses in several texts and in different legislation, which we address as follows:

First: The entity granting the license under the Ionizing Radiation Protection Law No. (99) of 1980

The Iraqi legislator prohibited the possession, use, manufacture, storage, loan, transfer, sale, purchase, import, export, possession, or carrying out any action whatsoever with sources of ionizing radiation, except after obtaining a license to do so. Therefore, practicing radioactivity in any form must be prohibited. It is carried out in accordance with a license from the competent authorities represented by the Radiation Protection Center (), where the Center is responsible for monitoring the use of radiation sources () for all peaceful uses and ensuring prevention of exposure to them or contamination by them, and to this end it may take several measures, including: Specifying the sources of radiation that are subject to authorization and those that are not subject to confiscation, in a statement published in the Official Gazette, as well as granting a license for dealing with radiation sources, granting a license for the trial operation of radiation sources, a license for the continuous operation of radiation sources, and finally approving the employment of people in radiation fields, provided that their age is not less than Eighteen years.

The legislator stipulated in this law that instructions should be issued by the Radiation Protection Authority specifying the conditions for granting the license and the necessary procedures and steps for that. It is not permissible for the person granted the license to carry out procedures contrary to the conditions stipulated in the license unless approval is obtained in advance from the center ().

Based on the provisions of this law, instructions were issued regarding granting a license for dealing with radiation sources No. (2) of 1985, which stipulated that it is not permissible to import radioactive materials and radiation generators after obtaining the license by submitting an application to the Radiation Protection Center and filling out the relevant forms (). As for whoever imports these materials without approval, he must visit the center, register them, and obtain the license within three months from the date of issuance of the instructions. Otherwise, the provisions of Article (20) of the Radiation Protection Law No. (99) of 1980 () will apply to him. These instructions also stipulate: Preventing the transfer of radioactive materials and radiation sources except after submitting a request stating all the details, obtaining the center's approval, and filling out special forms for that. In addition, these instructions stipulate prohibiting the import or transfer of radioactive materials without obtaining a license. They also stipulate preventing their use without a license issued by The center, where the concerned parties must submit a request to the center that includes all the details of these materials and those working on them (). Finally, these instructions addressed the issue of exporting radioactive materials, as it stipulated that a special license be taken from the Radiation Protection Center after submitting a request from the concerned parties stating the information. Related to radioactive materials to be exported ().

Second: The entity granting the license under the law of the Iraqi Authority for Control of Sources of Radioactivity issued pursuant to Coalition Authority Order No. (72) of 2004

The Iraqi Commission for the Control of Sources of Radioactivity is one of the independent Iraqi bodies, as Article (1) of Coalition Authority Order No. (72) of 2004 stipulates that "an Iraqi Commission for the Control of Radiation Sources shall be established pursuant to this order and shall be called (the Iraqi Commission for the Control of Radiation Sources)." It shall be an independent agency. "This body has been granted the authority to regulate radiation sources and all activities related to exposure or potential exposure to ionizing radiation from radiation sources and radioactive waste,

with the exception of activities of radiation sources specifically excluded in this matter" ().

The Commission was authorized, pursuant to Section (7) of Coalition Authority Order No. (72) of 2004, to issue licenses (official authorization) for the possession and use of radioactive sources and to approve exceptions, in addition to maintaining records related to use and authorization, and imposing fees on licenses. The legislator has tried to address the situation of multiple oversight bodies over radiation sources and the related granting of licenses to practice radioactivity and the overlap of their jurisdictions by stipulating the conclusion of agreements or understandings by the Authority and those bodies for cooperation and coordination among themselves for the purpose of avoiding gaps or overlap in the regulatory oversight process. While performing their responsibilities. If these agreements do not reach the mutual satisfaction of the joining agencies, these issues shall be submitted to the Administrative Director of the Coalition Provisional Authority for the purpose of settlement ().

Based on Coalition Authority Order No. (72) of 2004, the Commission issued its internal regulations No. (1) of 2006, according to which, in addition to the concept of authorization or authorization, another system was created, which is the exception, according to which a specific activity is excluded from obtaining a license to practice radioactivity in cases specified by the aforementioned system. Which( ) :

1. Potassium radiation (40) found in the human body.

2. Cosmic rays on the Earth's surface.

3. Radiation resulting from radioactive elements in raw materials within their natural concentration, provided that it is less than the exemption limits stipulated in the system.

4. Any other sources or cases determined by the Authority in a manner consistent with the radiation dose limits stipulated in the system.

In contrast, several activities were subject to the provisions contained in the system, including the necessity of obtaining a license, which are:

1. Radiological practices related to the possession, use and circulation of radioactive sources in Iraq from state departments, the public and private sectors, and foreign entities operating in Iraq, and the work of designing, constructing, assembling, importing, exporting, lending, renting, storing, transporting and maintaining radioactive sources.

2. Practices for managing radioactive waste resulting from non-nuclear practices.

3. Cases of radiation accidents.

4. Transporting radioactive materials inside Iraq.

5. Dealing with natural radioactive sources that lead to an increase in exposure of workers or the public beyond the prescribed limits ()

Accordingly, it is not permissible for any natural or legal person to practice the above-mentioned activities unless he submits a notification to the Authority before carrying out the practice. The Authority then studies the notification request and informs the applicant of the Authority's decision regarding his authorization and the required procedures. A notice request must also be submitted to the Authority specifically for each practice in a manner Independent( ).

We believe that the legislator should have used one term to indicate granting approval to practice radioactivity. The term would have been (license) instead of authorization or permit, and set specifications and conditions for granting a license for any activity in proportion to this radioactivity. The authority must also be authorized to grant radioactivity. One authority, as we find more than one administrative authority authorized

to grant approval for the practice of radioactivity, and this causes confusion and overlap in administrative jurisdictions.

Second section

Stages of granting a radioactivity license

The legislator usually stipulates several procedures that must be taken to obtain the necessary license or license to practice any radiological activity. Accordingly, we will discuss these procedures while highlighting the procedures mentioned by the Iraqi legislator in this regard.

First: Providing the possibility of obtaining authorization

First, the administration must provide the public and all institutions with the possibility of obtaining authorization to practice radioactivity. This is usually done by issuing controls and instructions specifying the activities falling within the field of radioactivity for which a license or registration is required. In this context, the Iraqi legislator stipulated in the law of the Iraqi Commission for the Control of Sources of Radioactivity issued pursuant to Coalition Authority Order No. (72) of 2004 in the second section that "the Commission may issue regulations and put them into effect in order to permit the use of radiation sources for beneficial purposes and to provide adequate protection for humans against The harmful effects of ionizing radiation..."

The legislator also stipulated in Article (7) of the Law on Protection from Ionizing Radiation No. (99) of 1980 that: "First - the Authority shall issue instructions specifying the conditions for granting the license and the necessary procedures and steps for that. Secondly - it is not permissible to take any action in violation of the conditions of the license, except after obtaining With prior approval from the centre.

The administration also prepares forms containing all the details of the various authorization requirements, and other forms required to be submitted, indicating the obligations of the authorized person. It is also necessary to make available all requirements, obligations, standards and systems issued by the Authority related to authorization, and any amendments thereto, including forms and schedules. The administration also issues binding decisions, guides and indicative instructions related to the safety and security of peaceful uses of atomic energy in all fields, which specify the types and steps. And the requirements for issuing various licenses, including documents, reports, and the results of studies prepared in this regard ().

Second: Submitting notification

The notification request is the first step in issuing the licensing decision. The notification request must be in writing, so that it is easy to refer to the specifications of the activities subject to the license and the extent to which they meet the requirements of the law. The license is required to be in writing, a condition confirmed by the atomic energy laws in the world, and it is useful to benefit from the various texts that require the necessity of a statement. The activity subject to the license, and recording radioactivity information on special forms ().

An official request called a notification must be submitted to obtain authorization to practice radioactivity to the competent authority, along with providing the required documents. The competent authority must be provided with the required documents such as the technical report of the project, the environmental impact study, the radiation safety report, and the medical and technical plan for the workers in the project. Field inspection. Field inspection is conducted. To ensure that the project complies with the technical and security standards required for radioactivity ().

A notification is “a document submitted by a legal entity to the Authority, not an indication of its intention to undertake a specific practice or any other procedure described in the general obligations to implement these standards” ().

The Iraqi legislator has regulated the provisions of notification and stated its requirements. It is not permissible for any person to practice specified radiological activities unless he submits notification to the Commission before carrying out the practice. The Commission studies the notification request and informs the applicant of the Commission’s decision regarding his authorization and the required procedures ().

The legislator has specified a special method for submitting notification. It required that the notification request be submitted before commencing the practice within (30) thirty days from the date of entry into force of this system. As for practices existing before the entry into force of the system, the notification request must be submitted within (90) ninety days from the date of its entry into force. Likewise, the notification request It is submitted to the Authority according to the notification form, which can be obtained free of charge from the Authority’s headquarters or its branches. The notification request is accompanied by the required information and documents contained in the notification form ().

Third: Submitting pledges

The license application must provide pledges to fulfill the obligations contained in the licensing granting forms. The authorized person, whether licensed or registered, must also provide pledges of all obligations stipulated under the system for controlling sources of radioactivity, which can be mentioned as follows:

1. Pledging commitment. Among these obligations is not allowing the practice to be practiced except by those who are technically qualified, and providing certificates of experience, academic qualifications, and practice of the profession to employees.

2. Using qualified experts in the safety and security of radiation sources and performing periodic maintenance and calibration of the devices and equipment used.

3. Maintain records of monitoring and verification results, including records of tests and calibrations ().

Fourth: Granting authorization (license or registration)

The Authority will study the notification request and notify the applicant of its decision about exempting the practice or subjecting it to the authorization requirements of the registration or licensing mechanism after completing the information within fifteen days of submitting the notification request ().

If it becomes clear that the activity does not have justifications for exception or exemption from granting a license, informing the responsible party, on the basis of the information provided in the notification form, of the necessity of obtaining an authorization to practice and specifying the appropriate type of authorization for it, the person requesting the authorization shall submit the information and data contained in the authorization form for the purposes of granting Authorization to practice in the form of registration or license, accompanied by the required information and documents ().

The Authority may exempt some activities from licensing requirements based on a request submitted to it or on its own initiative in several cases, namely:

1. If the risks resulting from the radiation source or radiation practice are so small that it is not justified to subject them to regulatory requirements.

2. If the dose to which the public is exposed does not exceed ten (microsieverts) per year.

3. If the cumulative effective dose does not exceed one (Sv/person).

4. Devices and equipment containing radioactive materials or sources are exempted in two cases: -

a. The radioactive sources and materials must be sealed and do not emit, under normal operating conditions, a dose rate exceeding one (microsievert) per hour and within a distance of (1 meter) from the surface of the device, and the amount of the cumulative dose received by the public does not exceed ten (microsievert) per year.

b. The maximum energy of radiation emanating from the device should not exceed five (kiloelectronvolts) ().

The Iraqi legislator also specified the conditions for obtaining and granting authorization, which are:

1. When possessing, using or handling radioactive sources from categories (4) and (5) according to the classifications of the International Atomic Energy Agency.

2. Reaching the radiation dose limits resulting from radiation practice to levels ranging between the radiation exemption levels and the dose limit levels of the levels mentioned in cases of requirements for granting authorization in the licensing manner.

5. Any other radiological practice that the Authority deems necessary to be subject to registration in accordance with radiological controls (). Authorization is granted in the form of registration in cases specified by the legislator, which are:

1. When possessing, using or handling radioactive sources from categories (4) and (5) according to the classifications of the International Atomic Energy Agency.

2. Reaching the radiation dose limits resulting from radiation practice to levels ranging between the radiation exemption levels and the dose limit levels of the levels mentioned in cases of requirements for granting authorization in the licensing method.

3. Any other radiation practice that the Authority deems necessary to be registered in accordance with radiation controls.

Accordingly, it is not permissible for any natural or legal person to practice the above-mentioned activities unless he submits a notification to the Authority before carrying out the practice. The Authority then studies the notification request and informs the applicant of the Authority's decision regarding his authorization and the required procedures. A notice request must also be submitted to the Authority specifically for each practice in a manner Independent ().

The second requirement

Restrictions on radioactivity licenses

As a result of the risks that the practice of radioactivity poses to the environment, contaminating it or harming people, the administration takes great care, when granting it a license to practice this activity, to preserve the environment from being contaminated with radiation and to ensure that the latter does not inflict significant harm on people. To illustrate this, we will discuss the restrictions contained in licenses. Radioactivity is divided into two branches. We allocate the first to restrictions for protecting the environment, and the second to restrictions for protecting individuals.

First branch

Environmental protection restrictions

Environmental issues are among the most important issues that countries have given attention to because exposure of the environment to pollution has major negative effects on economic growth and public health. The increase in population and progress in the use of technologies in various fields of human activity has led to an increase in environmental pollution, which has prompted countries to prepare plans and draft laws. And develop

strategies to address this problem and limit its effects. One of the most important ways to address this problem is to legislate environmental laws and place restrictions on the practice of some activities that could have a negative impact on the environment ().

In this regard, it is important to point out that the Iraqi legislator defined the environment in the Iraqi Environmental Protection and Improvement Law No. (27) of 2009 as "the environment with all its elements in which living organisms live and the effects resulting from human economic, social and cultural activities" ().

The legislator in the Kurdistan region did not deviate from the definition set by the federal law for protecting and improving the environment in force, noting that its definition was detailed and clear. Defining the meaning of the environment and enumerating its elements is from the definition of the federal legislator, where he defined the environment as "the biosphere that includes living organisms of humans, animals, plants, and biological components." And everything that surrounds it, such as air, water, soil, and the solid, liquid, or gaseous materials it contains, and the fixed and mobile structures that humans erect."().

As for the Egyptian legislator, in Egyptian Environmental Law No. (4) of 1994, he defined the environment as "the biosphere that includes living organisms and the materials they contain, and the air, water, soil, and facilities that humans establish" ().

One part of jurisprudence believes that by environment it means "the environment that relates to human life and health in society, whether it is created by nature or man-made, as it includes natural elements such as rivers, seas, air, and forests. It also includes elements that were made by man and have become part of the environmental environment, such as worms, civil constructions, and antiquities." And others ().

Environmental pollution is defined as: "A change in the natural characteristics of the elements that control the environment in which humans live, the most important of which are water, air, and soil, in a way that leads to damage to them as a result of improper uses of these elements by adding foreign materials to them" ().

As for environmental protection, the Egyptian legislator stated it as "Environmental Law No. 4 of 1994 in Article (9/1) defined environmental protection as "preserving and improving the components of the environment, preventing their deterioration or pollution, or reducing the severity of pollution. These components include air, steam, and water." The interior includes the Nile River, lakes, groundwater, lands, natural reserves, and other natural resources. From the content of the previous text, we find that the legislator was concerned with protecting the environment in all its corners, including water, air, and soil, and allocated special terms for each element separately, and created special texts for it and independent protection.

The right to a safe environment is one of the basic human rights that is characterized by qualitative characteristics that go beyond the scope of other human rights. It has a content that gains richness by belonging to a new pattern of international relations, where the international community has paid attention to environmental issues and its various problems. This has been clearly demonstrated in the efforts of the United Nations, which It played an important role in establishing the necessary rules and principles towards recognizing the human right to live and enjoy a healthy, clean and pollution-free environment ().

For all of the above, countries have set restrictions on the practice of radioactivity to ensure the reduction of its harmful negative effects on the environment. We find that the Iraqi legislator has many provisions for protecting the environment, which in their entirety constitute restrictions on the practice of radioactivity. We will address them as follows:

First: The restrictions on environmental protection stipulated in the Environmental Protection and Improvement Law No. (27) of 2009.

The Iraqi legislator considered materials with ionizing or magnetic radiation to be hazardous materials, as it stipulated in the Environmental Protection and Improvement Law No. (27) of 2009 that "Hazardous materials: materials that harm human health when misused or have a harmful effect on the environment, such as pathogenic agents or toxic materials." Or that are susceptible to explosion or flammability, or that contain ionizing or magnetized radiation. ()

It also prohibited the practice of activities that lead to the emission of non-ionizing electromagnetic rays except in accordance with controls and instructions, as it stipulated: "It is prohibited to do the following: Fifth: Practicing activities that emit non-ionizing electromagnetic rays emitted from major broadcast stations, towers, mobile phone antennas, and others." Except within the scope of the instructions and controls issued by the Ministry for this purpose." ()

The legislator also prohibited cases of disposal of radioactive waste except by using methods that do not harm the environment, as it stipulated: "The following is prohibited: Second: Transporting, handling, introducing, burying, dumping, storing, or disposing of hazardous or radioactive waste except by using environmentally sound methods and obtaining approvals." Official instructions issued by the Minister in coordination with the concerned authority" ().

In addition to that, the legislator prohibited dealing with hazardous materials, including radioactive materials, in any form except in the manner stipulated by law and in a way that ensures no harm to the environment, as it stipulated: "The following is prohibited... Third: The production, transportation, circulation, import, or storage of hazardous materials except after taking the stipulated precautions." It is stipulated in the applicable laws, regulations and instructions to ensure that no environmental damage occurs, and the owner of any facility or activity must notify the Ministry of any discharge that occurs due to a compelling reason into the environment of hazardous materials or products and take the necessary measures to avoid the resulting damage, and also prevent the introduction or The passage of radioactive waste into Iraqi territory, as it stipulates: "The following is prohibited:... Fourth: The entry and passage of hazardous and radioactive waste from other countries into Iraqi lands, airspace, or maritime areas except after prior notice and obtaining official approvals" ().

In order for the legislator to make the previous rulings binding, it stipulated a set of punitive provisions. On the one hand, the Minister of Environment was authorized to issue a warning to any facility or entity that caused environmental pollution to remove the source of pollution within ten days from the date of notification of the warning and to temporarily close the facility or factory in the event of non-compliance with the warning. The Minister may impose a fine on anyone who violates the provisions of this law with a fine of not less than one million Iraqi dinars and not more than ten million. The violator of the provisions of this law also exposes himself to imprisonment for a period of not less than three months or to a fine of not less than one million Iraqi dinars and not more than twenty million. One dinar or both penalties, and the penalty is doubled every time the violation is committed again, as the legislator stipulates that the penalty of imprisonment, with compensation, is imposed on the violator when he commits violations specified by the law, while obliging him to return hazardous or radioactive materials or waste to their origin or dispose of them in a safe way with compensation. "( ).

The researcher believes that what the legislator counts is to give attention and treatment to all practices of radioactivity that affect the environment. We see it as prohibiting the practice of radioactivity, such as transporting, trading, introducing, burying, dumping, storing, producing, transporting, trading, importing, storing, or disposing of radioactive waste. Or the introduction and passage of hazardous and radioactive waste from other

countries into Iraqi lands, airspace, or marine areas except in accordance with controls and instructions. The legislator's protection of the environment came to include all radioactive activities. The legislator did well again when it granted the administration the authority to address the risks of environmental pollution when it granted the minister the authority to issue a warning to raise Environmental violations and the imposition of some financial fines. He also ruled to impose more severe penalties in proportion to the severity of the violation and its environmental damage.

Second: Restrictions on environmental protection stipulated in the Ionizing Radiation Protection Law No. 99 of 1980.

This law came to regulate the provisions for dealing with sources of ionizing radiation for peaceful purposes and established a regulatory body called (the Radiation Protection Center), as it stipulated in Article (5) "First - a center shall be established pursuant to this law called (the Radiation Protection Center), linked to the Chairman of the Commission. Secondly: - The formations of the center and its powers are determined by instructions issued by the Authority. Third - The center is run by a director, appointed by the Chairman of the Environmental Protection Council, provided that he has specialization in radiation fields. He is the direct head of the center, orders and decisions are issued in his name, and he implements the decisions of the Authority..."

The legislator specified the tasks of the center, entrusting it with the task of monitoring the use of radiation sources within the scope of peaceful uses and taking the necessary measures to reduce the pollution resulting from this use by identifying radiation sources that are subject to granting a license and those that are not subject to a license (), and the center is responsible for monitoring the use of radiation sources for peaceful uses. All and ensure prevention of exposure to it or contamination by it. To this end, it may take several measures, including:

1. Determine the sources of radiation that are subject to authorization and those that are not subject to confiscation, in a statement published in the Official Gazette.

2. Granting a license for dealing with radiation sources

3. Authorizing the trial operation and continuous operation of radiation sources.

4. Approval to employ people in radiation fields, provided that they are not less than eighteen years of age.

Second section

Restrictions to protect individuals

It is natural, due to the danger of these rays to the health of those who work with them and to public health, that their use be limited to those who are qualified and hold a work permit. Regulating the granting of these licenses requires that it be undertaken by a technical body from among the specialists and professors specialized in considering the granting of these licenses to the various categories of doctors, scientists, and assistants.

Work in this new field of using ionizing radiation of various types and the wide range of its applications necessitated the presence of specialized categories of technicians who can carry out the work in it with a real understanding of their tasks and a complete understanding of matters of protection from the dangers of these radiations. These technicians belong to the following four categories:

1. Qualified experts who are the first pillar of the central committees and executive offices, as they are referred to in technical and scientific affairs, measurement work, instrumentation, and fulfillment of prevention conditions.

2. Medical radiation physicists, who are the first pillar of qualified experts and directly supervise the measurement processes.

3. Radiology technical assistants who assist doctors and scientists in their technical work with X- and gamma rays.

4. Technical assistants for open radioactive materials who assist in radioactive materials laboratories and places of use.()

The Iraqi constitution generally emphasized the concern for the health of Iraqis and the provision of health care and obligated the state to guarantee means of prevention and treatment (). In affirmation of the right to health care and prevention guaranteed by the constitution, the legislator paid great attention to the issue of protecting workers and the public when setting the provisions for regulating radiological activities in its various forms. Individuals and institutions must adhere to these restrictions and procedures and work to implement them strictly to maintain the safety of workers and the public and reduce the negative impact on health and the environment. The public must also be made aware of the importance of adhering to these restrictions and procedures and working to preserve their safety and health and protect the environment. It may include awareness of the importance of using protective equipment and preventive measures in work environments, maintaining the cleanliness of public places, and reducing the production of waste and polluted waste ().

In order to shed light on this, it is necessary to examine the provisions for protecting workers and the public in the most important relevant laws, as follows:

First: Restrictions for the protection of individuals based on the Ministry of Environment Law No. 37 of 2008

One of the most important goals of the Ministry of Environment is to protect humans. To achieve this, it takes the necessary measures to reduce the risks of ionizing and non-ionizing radiation to humans through coordination with the competent and relevant authorities. The legislator also stipulates in the Environmental Law that the Ministry seeks to achieve its goals by taking the necessary measures to protect humans. And the environment from the dangers of ionizing and non-ionizing radiation, and coordination with the Iraqi Authority for Control of Sources of Radioactivity and relevant authorities ().

Based on this law, instructions were issued to protect against non-ionizing radiation issued by mobile phone systems No. (1) of 2010 (), which included several provisions to protect humans from the potential biological effects of non-ionizing radiation issued by mobile phone systems. It stipulated that it is not permissible to establish switchboards. Central stations in residential neighborhoods or within the buildings of hospitals, schools, kindergartens and nurseries must be established as an independent facility, as well as base stations within the buildings of hospitals, schools, kindergartens and nurseries and on the roofs of buildings used for other purposes such as housing, base stations on the roofs of buildings not built with reinforced concrete, or base stations on the ground. Residential homes, such as gardens and courtyards ().

Second: Restrictions on the protection of individuals under the law of the Iraqi Commission for the Control of Sources of Radioactivity issued pursuant to Coalition Authority Order No. (72) of 2004 and its internal regulations.

The Iraqi legislator granted the Commission, in accordance with the provisions of the law of the Iraqi Commission for the Control of Sources of Radioactivity, to issue regulations that provide adequate protection for humans against the harmful effects of radiation and to ensure the protection and security of radiation sources ().

It also granted the Authority the authority to issue regulations that control the life cycle management of radioactive sources required for the health, protection, and security of society, and to set the obligations specified in the regulations and licenses to be applied to those who possess radioactive sources, including, for example, taking the necessary

measures to implement the process of compliance with regulatory requirements and licenses, as well as to protect the health and safety of workers. And society and impose penalties for any violations of the Authority's requirements to the maximum extent. The provisions of this law also prohibit entry to buildings and facilities in which radioactive sources are located by any person except licensed employees of the Authority and the Ministry of Environment. They are only permitted for the purpose of obtaining information about the state of protection of materials. Radioactive and ensure compliance with regulatory requirements.

Under the bylaws of the authority formed pursuant to Law No. (1) of 2006, the legislator established several provisions to protect workers in the radiation field as well as the rest of the public. Among the objectives of this system was to set rules to ensure the security of society and protect workers, individuals and patients from the risks of exposure to radiation, as The procedures contained in this system shall be applied in the event that it is naturally radioactive and leads to an increase in exposure of workers or the public that exceeds the prescribed limits ().

Also, the origin of radiation practice is based on the principle of reducing radiation exposure to individuals to the minimum possible and reducing the number of people exposed to radiation (), and it is not permissible to undertake any radiation practice unless it achieves a benefit to society or to workers. This benefit is of a level sufficient to justify exposure to radiation damage, and no grants are granted. Authorization to engage in radioactive activity if they are used in children's toys, jewelry, and decorative items. Likewise, it is not permissible to add any radioactive materials to drinks, food, or any commodity related to human food or breathing, or to any materials taken through the skin, such as cosmetics ( ).

The legislator has placed several obligations on the authorized person that represent restrictions aimed at protecting workers and other individuals, including: Taking the necessary measures to reach the minimum levels of radiation exposure received by workers or those related to authorized radiation practice, providing the necessary trained manpower in numbers commensurate with the nature of radiation practice and at the appropriate scientific level, and providing safety services such as measuring personal exposure doses for workers. Providing medical and health services in a size commensurate with the extent of the expected risks, training workers to use equipment for radiation practices both in normal and emergency circumstances, with retraining and updating it on safety and security methods on a periodic basis, and providing professional and non-professional workers with sufficient information about the radiation risks that arise. They may be exposed to it in normal and emergency circumstances and how to prevent it, and develop emergency plans to confront abnormal incidents related to radiation practice within the facility and secure personal protective equipment for emergency radiation cases in addition to monitoring and evaluating radiation exposures to workers in radiation practice and the boundaries of its applicable areas from the Radiation Protection Center affiliated with The Ministry of Environment, through evaluating doses in monitored and supervised areas and radiation conditions in the work environment, equipping workers with the necessary personal protective equipment such as protective clothing (suits, gloves, masks), protective shields, and testing the validity of the equipment during regular periods ().

The legislator also set a minimum age for those working in radioactivity. No individual under the age of sixteen years was allowed to do work that involves occupational exposure. Likewise, no individual under the age of eighteen years was allowed to work in the controlled areas unless he was subject to direct supervision and for training purposes. Only ().

We believe it is necessary for the legislator to stipulate that the minimum age for persons working in the field of radioactivity be no less than twenty years and not sixteen years,

and to prohibit the employment of persons under eighteen years of age in any radioactive activity because the legislator and in the Labor Law () prohibit the employment Juveniles (those who have reached fifteen years of age but not eighteen years of age) in work that, by its nature or circumstances, is harmful to their health or safety. There is no doubt that work in radioactive activities by its nature carries risks that affect the health and safety of those working in it.

Conclusion

After completing a study on the subject of the legal provisions for radioactivity licenses and the restrictions imposed on them in Iraq, we have reached several results, and we also decided to put forward a number of proposals, as follows:

First: results

1. The legislator granted the authority to issue authorization (license or registration) to more than one administrative body (the Radiation Protection Center) and (the Iraqi Authority for Control of Sources of Radioactivity).

2. The Iraqi Authority for the Control of Radioactivity Sources was authorized under Section (7) of Coalition Authority Order No. (72) of 2004 to issue licenses (official authorization) for the possession and use of radioactive sources and to approve exceptions.

3. The Radiation Protection Center was authorized to issue licenses for dealing with radiation sources, whether it is owning, using, manufacturing, storing, lending, transporting, selling, buying, importing, exporting, possessing, or carrying out any other action with sources of ionizing radiation.

4. The legislator attempted to address the situation of multiple bodies controlling sources of radiation and the related granting of licenses or licenses to practice radioactivity and the overlap of their jurisdictions by stipulating the conclusion of agreements or understandings by the Iraqi Authority for Control of Sources of Radioactivity and those bodies for cooperation and coordination among themselves for the purpose of avoiding... Gaps or interference in the organizational control process during the performance of responsibilities and tasks.

Second: Suggestions

1. We call on the Iraqi legislator to amend the penalty referred to in Article (20) of the Ionizing Radiation Protection Law No. (99) of 1980, so that it is severe when there are serious violations, such as practicing radioactive activity without authorization, and it is light when there are non-serious violations, such as delaying... Preparing the reports requested by the Radiation Protection Center, as it is illogical for the prescribed penalty to be the same and apply to all violations.

2. We suggest to the legislator that the license be for a specific period, renewed periodically, and be granted for each specific radiological practice.

3. We suggest that the legislator work to compile the provisions related to regulating licenses for the practice of peaceful radiological activities into one piece of legislation and assign the authority to issue licenses to one administrative body.

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