

Slate

Security of radioactive sources during circulation

Part One

General Provisions

Article (1)

Purpose

This regulation aims to determine the basic requirements for the security of radioactive sources during circulation, in order to prevent, detect and address cases of loss, theft, vandalism, unauthorized access and other criminal acts, in a manner that ensures the safety and security of humans, property and the environment from ionizing radiation of these sources without exempting the licensee from taking any additional measures - in a manner that does not conflict with the provisions of this regulation - that lead to strengthening and strengthening the security of the circulation of radioactive sources.

Article (2)

Range

The provisions of this regulation shall apply to all categories of radioactive sources during their circulation in various nuclear and radiological facilities and activities, with the exception of radioactive sources during transport, import or export and radioactive sources exempted from regulatory control in accordance with the regulations issued by the Authority.

Article (3)

Tariffs

In the application of the provisions of these Regulations, each of the following phrases and words shall have the meanings assigned to each of them:

Law:

Executive Regulations:

Commission:.

The circulation of radioactive sources means, for the purpose of these Regulations, anything that leads to the use, reoperation, dealing, conversion or storage of a radioactive source.

Physical protection system: An integrated set of physical protection measures designed to protect radiation sources during circulation.

Physical protection measures: All security measures - technical and administrative - aimed at preventing, detecting and responding to events related to nuclear security and delaying the aggressor when committing any criminal act.

Physical Protection Plan: A document prepared by a licensee that includes a detailed description of all existing physical protection measures.

Physical barriers: Natural, artificial or any other obstacles that hinder the aggressor from accessing radiation sources or related information such as containers, buildings, closed rooms, cages, fences, walls and fences.

Counterforces: Persons armed, equipped and trained to respond to events related to nuclear security.

Step-by-step approach: implementation of physical protection measures commensurate with the category of radioactive sources and associated potential risks related to nuclear security.

Events related to nuclear security – for the purpose of this regulation – are those events that adversely affect the security of the circulation of radioactive sources.

The principle of defense in depth: the use of a combination of multiple layers of physical protection measures that the aggressor is forced to overcome before reaching the places where radioactive sources and related information circulate.

Access control: A set of measures that prevent unauthorized access to places of circulation of radiation sources and related information and limit access to them only to authorized persons.

Nuclear Security Culture at the facility: Educating the facility's employees with a set of facts and information about the elements of nuclear security, in order to establish interest in the issues of this security in a manner commensurate with their importance and seriousness.

Trust Verification: Assess a person 's integrity and honesty and verify their motivations and behaviors.

The principle of knowledge as needed: The right to access or access information relevant to the security of the circulation of radioactive sources shall be limited to authorized persons and to the extent that they can perform their functions.

Two-person rule: A procedure requiring the simultaneous presence of two persons - authorized and experienced - at the places of circulation of radioactive sources in order to verify that neither of them has committed any unlawful act that violates the security of such sources.

Article (4)

Inspection

The Authority shall carry out declared and unannounced inspections to evaluate the physical protection system and ensure its effectiveness, in light of the provisions stipulated in the Law, its executive regulations, regulations, rules and decisions issued by the Authority, and for this purpose it may do the following:

- 1.Initial inspection:** to verify the availability of appropriate physical protection measures in accordance with the provisions of these Regulations , before the Authority approves these measures.
- 2.Routine inspection:** to verify the implementation and effectiveness of physical protection measures related to the security of the circulation of radioactive sources.
- 3.Special inspection:** In the event of an accident related to the security of radiation sources, a change to the physical protection system, a defect in this system, or if the Authority deems it necessary to conduct such inspection.

Article (5)

Basic Commitment

The licensee shall establish and implement a physical protection system commensurate with the category of radiation sources and the risks associated with them in accordance with these Regulations, and this system shall ensure

the protection of radioactive sources during their circulation and related information in ordinary cases as well as in cases of accidents and the removal of their effects.

The licensee shall also be obliged to circulate radioactive sources in the places approved by the Authority and specified in the physical protection plan.

Article (6)

Modification of physical protection measures

The Licensee shall not make any additions or amendments to the physical protection system approved by the Authority without obtaining the written approval of the Authority, and he shall notify the Authority in writing of his desire to make any additions or amendments to the existing physical protection system, explaining all data and information related to the proposed addition or amendment.

Article (7)

Classification of radioactive sources

The licensee is obliged to determine the category of radioactive sources in its possession or control in accordance with the Rules for the Classification of Nuclear Materials and Radioactive Sources from a Nuclear Security Perspective issued by number Year, with a view to determining the physical protection measures to be taken in respect of each category in a way that ensures their protection during circulation.

Article (8)

Physical Protection System

The licensee shall include the physical protection system within the organizational structure of the facility in order to ensure the application of all requirements related to the security of the circulation of radiation sources contained in this regulation, and this system includes the following:

1. Develop a clear policy and vision for nuclear security within the facility.
2. Determining the roles and responsibilities of the facility's employees, and training and qualifying them as necessary to perform these responsibilities.

3. Develop regulatory procedures that ensure the separation of confidential information related to the security of radiation sources, as well as maintaining its confidentiality during its circulation between the different levels within the facility.
4. Develop a structured approach to training and qualification that includes comprehensive training programmes in the field of nuclear security.
5. Procedures and means of verifying the effectiveness and adequacy of the existing physical protection system in performing the tasks assigned to it, and identifying problems that may affect the security of radiation sources and ways to address them in an appropriate manner.

Article (9)

Physical Protection Officer

The Licensee shall identify one or more persons responsible for the physical protection work and notify the Authority thereof, provided that he is among the permanent workers who have obtained an appropriate high qualification and the necessary training related to physical protection systems.

Article (10)

Nuclear Security Culture

The licensee is obligated to take the necessary measures to promote and evaluation Nuclear Security Culture Emphasizing the importance of a culture of nuclear security in reducing the risks resulting from the circulation of radioactive sources Which ensures the following:

1. Raising the awareness of employees about the importance of the nuclear security system to face the risks associated with the use of radioactive sources.
2. Alert to the existence of real threats – internal and external – in this regard, the importance of the role played by persons in confronting these threats, the danger of these relevant sources and information if they remain unprotected, and the importance of the physical protection system in addressing this risk.

Article (11)

Training

The licensee is obliged to develop and implement a training plan for personnel related to the security of radiation sources - according to the nature of work of each individual - aimed at:

1. Qualifying employees, developing their skills and performing their job duties.
2. Introducing the roles and responsibilities of workers in the physical protection system and how to carry out the role entrusted to them in accordance with the laws, regulations and procedures governing their field of work.
3. Develop skills to identify problems affecting the security of radiation sources and correct them according to a gradual approach.

This plan shall include continuous training programs - related to the security of radioactive sources during circulation - for employees from the beginning of their employment and at appropriate periodic intervals throughout the period of operation of the facility, including:

- 1. A training program to spread the culture of nuclear security aims to:**
 - A.** Increasing awareness among employees about the nuclear security system and its role in facing the risks associated with the circulation of radioactive sources.
 - B.** Introducing the importance of the physical protection system in protecting radiation sources and related information.
 - C.** Introducing the laws, regulations and procedures governing their field of work.
- 2. A basic training program in nuclear security for all personnel aimed at:**
 - A.** Provide basic knowledge about nuclear security, its importance and value.
 - B.** Requirements and methods for reporting security violations related to the security of circulation of radioactive sources.
- 3. A training program for security personnel that aims to:**
 - A.** Define the roles and responsibilities of security personnel.
 - B.** Knowledge of the authorities and stakeholders related to nuclear security.
 - C.** Good knowledge of the places of circulation of radioactive sources

D. Knowledge of measures to respond to events related to nuclear security.

These programmes must be documented, archived, continuously evaluated, reviewed and updated in light of the results of this evaluation.

Article (12)

Reporting of Nuclear Security-Related Events

In addition to the rules and procedures stipulated in the Law and its Executive Regulations on the Reporting of Nuclear Security-Related Events Occurring on Radioactive Sources during their Circulation, the Licensee shall, in the event of loss, theft, sabotage, unauthorized access or any other criminal acts targeting radioactive sources, comply with the following:

- 1- Inform the Authority in writing immediately upon the occurrence of the event.
- 2- Submit a summary report to the Authority on the causes, effects and description of the event within 24 hours from the time of its occurrence, including:
 - I. The physical state and chemical composition of the radiation sources in question.
 - II. Number of radioactive sources and radioactivity.
 - III. Actions and measures taken to deal with the event.
- 3- Submit a detailed report to the Authority within 30 days from the date of the event or / or at the end of the effects of the event including:
 - I. The physical state and chemical composition of the radiation sources in question.
 - II. The number of radiation sources and their radioactivity.
 - III. The reasons that led to the occurrence of the event and those responsible for it.
 - IV. Effects of the occurrence of the event.
 - V. Measures to recover radioactive sources if they are lost.
 - VI. Corrective measures to minimize the effects of the event.
 - VII. Preventive measures taken to avoid such events in the future.

Article (13)

Transfer of ownership of radioactive sources

The licensee may not transfer ownership of radioactive sources to other parties unless the following conditions are met:

1. The licensee obtains a permit from the Authority to transfer the ownership of radioactive sources.
2. The transferee obtains a license from the Authority to possess and circulate the transferred radioactive sources .

Article (14)

Step-by-step approach

The licensee shall implement the measures set forth in these Regulations in accordance with a step-by-step approach commensurate with the category of radioactive sources and related information and associated risks in such a way as to ensure the protection of such sources and information from events related to nuclear security.

Part Two

Physical protection measures

Article (15)

Physical protection measures

Physical protection measures are integrated with the concepts of industrial security, occupational safety and health and radiation protection measures and conform to the design of the facility to reach an effective physical protection system.

These measures must be submitted to the Authority for approval, and the following table provides an explanation of how these measures are applied to radiation sources of various categories.

Category IV and V (Low risk)	Category III (Medium risk)	Category II (High risk)	Category I (High risk)	Physical protection measures
Take appropriate measures to protect the source from events related to nuclear security.	Establish measures to control access to places of circulation of radioactive sources and related information in accordance with Article (17) of these Regulations.	-Establish measures to control access to places of circulation of radioactive sources and related information in accordance with Article (17) of these Regulations. -Use the two-person rule. -Use an electronic system to control access and verify people.		Access Control
	Using a system to detect unauthorized access to the places of circulation of radiation sources and related information, connected to a control and control room 24 hours / 7 days, and has the ability to immediately detect and evaluate warnings and identify the places issued by them, in accordance with the provisions of Article (18) of these regulations.			Unauthorized access detection
	Radiation sources and related information shall be protected by at least two physical barriers to prevent unauthorized access to them, delay the aggressor in carrying out his criminal act and provide sufficient time for the counter-forces to respond in accordance with the provisions of Article (19) of these Regulations.			Physical barriers
	Establish and implement response measures to nuclear security-related events, including arrangements with response forces to ensure appropriate and effective response time in accordance with the provisions of Article 20 of these Regulations. Response measures should be reviewed and updated in the event of any nuclear-security-related events involving radioactive sources.			Response measures
	Prepare a physical protection plan for radioactive sources in accordance with Article (23) and Annex No. (1) of these Regulations.			Physical Protection Plan
<ul style="list-style-type: none"> - Establish procedures for the maintenance and testing of physical protection devices, including the preparation of a schedule for maintenance and testing. - Keeping and recording the results of maintenance and testing in designated records and keeping those records in a way that prevents unauthorized access to them. 				Maintenance and testing of physical protection devices

- Develop procedures to repair and replace these devices in the event of their malfunction or stop in the shortest possible time, while taking the necessary compensatory measures.				
Criminal Record Verification	Take the necessary measures to verify the confidence of all employees of the facility related to the circulation of radiation sources in accordance with Article (24) of these Regulations.	Check trust availability		
Implement measures to ensure the protection of information related to the security of radioactive sources and ensure its circulation among authorized persons only on the basis of knowledge as needed and in accordance with Article (25) of these Regulations.		Information Security		
Conducting physical inventories of radioactive sources at appropriate intervals	Conduct physical inventories of radiation sources monthly.	Conduct physical inventories of radiation sources weekly.	Conduct physical inventories of radiation sources daily.	Physical Inventory

Chapter One Technical measures

Article (16)

The licensee is obliged to establish and implement technical measures designed in accordance with the principle of defense in depth - commensurate with the category of radiation sources and associated risks - in the following areas:

1. Access control.
2. Detection of unauthorized access.
3. Physical barriers.
4. Response to alarms.
5. Maintenance and testing of physical protection devices.

Article (17) Access Control

The Licensee undertakes to establish and implement effective measures to control the access of persons to the places of circulation of radiation sources and related information, to ensure the entry of only authorized persons, as follows:

1. Identify all entry and exit points to the places of circulation of radiation sources and secure them in an appropriate manner, limiting these points to the minimum number necessary.
2. Use electronic or mechanical access control systems such as manual or electronic locks, access card readers, or biometric devices.
3. Establishing and keeping records for all authorized persons to enter, as well as records to follow up the entry and exit of authorized persons to the places of circulation of radioactive sources, whether through the use of paper records or electronic devices equipped with a system for storing and retrieving data on access.
4. Issuing entry permits to places of circulation of radiation sources for persons whose work requires it, after ensuring that they have confidence.
5. Take the necessary measures to prevent unacceptable practices in entering places of circulation of radiation sources, such as the use of the same access card by two or more persons, or the passage of an unauthorized person in conjunction with an authorized person.
6. Cancellation of permits for persons to enter the places of circulation of radioactive sources as soon as the purpose of their issuance ends.
7. Accompany persons who do not have a permit or permission to enter throughout their presence at the places of circulation of radiation sources by authorized persons to enter.
8. Take the necessary measures to secure the entrance control devices from tampering or sabotage.
9. Establish and implement access control measures as follows:
 - I. Setting written rules that include the procedures for issuing, cancelling, repairing, replacement, using or changing keys or access cards and the procedures for handling these keys and cards in a manner that prevents them from falling into the hands of an unauthorized person, such as preventing the copying of these keys and returning these keys and cards to the place of storage as soon as the purpose of their use ends.
 - II. The use of secure locks and keys that are difficult to copy and have high security features.

III. Limit the use of access keys and cards, whether electronic or manual, in the establishment to authorized persons only, subject to the following measures:

1. Reduce the number of people who have the right to use these keys and cards.
2. Reduce the number of key keys and cards.
3. Store these keys and cards in safe places.

IV. Create and keep records of all cards and keys granted to people, including the names, date and duration of issuance of those to whom they were issued, as well as recording the movement of those keys and cards.

Article (18)

Unauthorized access detection

The licensee shall establish and implement measures for the detection and warning of attempts at unauthorized access to places of circulation of radiation sources and related information using appropriate detection and warning means to ensure continuous monitoring of such places, as well as the establishment and maintenance of records to record warnings and their causes.

Monitoring and detection operations are carried out through the use of the following means and systems:

1. The intrusion detection sensor system is connected to the control room.
2. Electronic alarm system.
3. Camera surveillance system with continuous surveillance.
4. Visual monitoring inside and outside the places of circulation of radiation sources.

Detection and warning systems and means must have the following characteristics:

1. Immediate detection of any unauthorized access to the places of circulation of radioactive sources.
2. Immediate detection of any tampering with the detection and alarm devices.

3. Launch audible and visual warning signals in a continuous manner in case of detection of infiltration or intrusion attempts.
4. The ability to determine the place from which the alarm originates.
5. Immediate evaluation of alarms by surveillance cameras or by security personnel.
6. Reduce false alarms to a minimum.

The licensee shall take into account the multiplicity and diversity of the detection and alarm devices used and the integration between them, as well as provide an alternative source of energy in the event of a power outage to ensure the continued operation of detection and alarm systems and means while providing appropriate lighting for cameras and surveillance.

Article (19)

Physical barriers

The Licensee shall establish various and multiple physical barriers to protect radioactive sources, in order to prevent unauthorized access to the places of circulation of such sources, delay the aggressor in carrying out his criminal act, and provide sufficient time for the counter-forces to respond and intervene in a timely manner, provided that the number of such barriers shall not be less than two different barriers.

The following requirements must be met in containers in which radioactive sources are handled:

1. Good installation in the place.
2. Resistance to attack with hand tools.
3. Good sealing of those containers using sealing methods appropriate to the category of radiation sources.
4. Control access to them.

The following requirements must be met in the places where radiation sources are circulated:

The places of circulation of radiation sources must be within a secure and access control perimeter, and all external components of these places,

such as walls, doors and windows, should be resistant to attack using hand tools as follows:

1. Provide windows through which access to the places of circulation of radiation sources can be provided with iron bars, a metal mesh or glass reinforced against breakage.
2. The doors through which the places of circulation of radiation sources in the facility can be accessed must be of reinforced metal, and an external frame for these doors must be installed that is no less durable and strong than the material of the door, and provide them with a lock, hinges and screws that are difficult to remove.
3. Equipping ventilation holes and pipes with large openings, if any, through which the places of circulation of radiation sources can be accessed with iron rods or metal mesh.

Article (20)

Response to alarm

The licensee is obliged to develop and implement measures to ensure prompt response to confirmed warnings resulting from nuclear-security-related events, including:

1. Mechanism for informing response forces of events related to nuclear security.
2. Define the roles and responsibilities of facility security personnel in responding to nuclear security-related events.
3. Arrangements with response forces to nuclear security-related events taking into account the following considerations:
 - I. Reduce the arrival time of counter-forces to the scene of the event to a minimum of time.
 - II. Provide sufficient numbers to confront the aggressors and appropriate equipment for the counter-forces
 - III. Determine the means of communication between these forces and the licensee.

Article (21)

Maintenance and testing of physical protection devices

The licensee shall develop and implement a plan for the maintenance and testing of physical protection devices that includes:

1. Identify a maintenance officer to whom all maintenance and testing work will be assigned.
2. Prepare a schedule for maintenance and tests at least every six months.
3. Establish procedures for repairing and replacing faulty devices in the shortest possible time.
4. Develop and implement compensatory measures in the event that one of the physical protection devices is out of service, whether for maintenance or due to a malfunction.

Chapter Two

Administrative measures

Article (22)

The licensee shall develop and implement administrative measures to support technical measures in securing radioactive sources, including policies, plans, programs and procedures to achieve the objective of these measures, including:

1. Physical protection plan.
2. Check the availability of trust.
3. Information security.
4. Computer security.
5. Protection from insider threats.
6. Physical inventory.

Article (23)

Physical Protection Plan

The licensee shall prepare a physical protection plan for radioactive sources of the first, second and third categories in accordance with Annex No. (1) "Physical Protection Plan Form for Radiological Sources", and submit it to the Authority for approval, and this plan is a confidential document that must be stored in a secure manner and the right to access it is limited in accordance with the principle of knowledge as needed.

Article (24)

Check trust availability

The licensee shall take the necessary measures to verify the confidence of all personnel related to the circulation of radioactive sources to ensure that they do not pose a threat to the security of these sources. This is done through a set of evidence and evidence that helps in assessing the integrity and honesty of employees, including, but not limited to:

 Before appointment such as:

1. Investigations carried out by the security authorities.

2. Conviction for serious crimes such as murder, attempted murder, or other violent or moral turpitude crimes.

3. Abuse of or trafficking in illicit drugs or alcohol.

4. Dangerous behaviors that are due to mental disorders or others.

✚ Or while working during the test period and beyond, such as:

1. Non-compliance with labor laws, regulations and directives.

2. Violation of security or safety procedures in the facility.

3. Acts that warrant criminal investigation and conviction of perpetrators.

4. Enmity with or abuse of co-workers.

Article (25)

Information Security

The licensee is obliged to develop and implement measures to protect information related to the security of radiation sources from any unauthorized disclosure, manipulation or circulation, including:

1. Determine the duration of retention of this information and ways to dispose of it.

2. Limit the circulation of this information between authorized persons only on the basis of the principle of knowledge as needed.

3. Store this information in a secure manner that prevents unauthorized access to it as follows:

A. In the case of storing information electronically, the following must be taken into account:

1. Store this information in secure electronic storage devices and place it in a safe place.

2. Not to store information on an open or shared network without proper protection.

3. Provide a backup and recovery system for data and information in case of failure or sabotage of platforms

4. Use passwords or encryption software for this information.

B. If the information is stored in paper records or kept in the form of documents or documents, such records or documents must be stored in a safe place.

4. To observe the following measures in the case of transmission and transmission of information related to the security of radiation sources:
- I.** Determine the level of confidentiality of the document on each of its pages in clear handwriting.
 - II.** Sending documents and correspondence related to the security of radiation sources to the Authority through a trusted person.
 - III.** Do not use electronic means of transmission that are easily porous to transmit confidential information such as e-mail.

Article (26)

Computer Security

The licensee shall establish a system to secure computers used in the physical protection system or in other systems supporting safe and secure operation and other systems based on computers, networks or digital systems in order to protect the confidentiality and integrity of such computer systems and processes and electronic data.

Article (27)

Protection from insider threats

The licensee is obligated to develop and implement the necessary preventive and corrective measures to protect radiation sources from threats that may arise from workers inside the facility, with the need to provide an appropriate work environment that prevents the existence of such threats.

Article (28)

Physical Inventory

The licensee is obligated to prepare a list of all radioactive sources in its possession or under its control as well as to preserve them, and is also obligated to conduct periodic inventories of these sources in their places of circulation to ensure that they are not subjected to any change or manipulation, and must be registered. and save The results of physical inventories are in the records designated for this.

Article (29)

Mobile radiation sources

The licensee shall develop and implement additional measures for mobile radiation sources during their circulation - in the event that it is difficult to apply some of the requirements contained in this regulation - in order to provide appropriate protection for them, such as continuous visual monitoring of these sources, with the need to provide an appropriate and safe means of communication for those in charge of monitoring work.

Article (30)

Security personnel

The licensee shall appoint security personnel responsible for protecting radioactive sources, controlling access, evaluating alarms, protecting physical protection devices, initial response to events related to nuclear security, and providing them with appropriate means of communication and tools necessary to perform their work.

It is also obliged to establish and maintain written procedures and instructions for security personnel, including, in particular, the following:

1. Procedures for controlling access to places of circulation of radioactive sources and related information.
2. How to assess and respond to alarms.
3. How to deal with hackers or aggressors.
4. Mechanism for reporting and dealing with events related to nuclear security.
5. How to operate different security devices.

Article (31)

Ensure the effectiveness of the physical protection system

The licensee shall ensure the effectiveness of the existing physical protection system annually or if the Authority deems it necessary, by evaluating the effectiveness and efficiency of the existing physical protection measures in protecting radiation sources and related information in order to identify the weaknesses of this system.

The licensee is also obligated to record the results of the process of verifying the effectiveness of the physical protection system in dedicated records, and to update the physical protection system in light of those results.

Annex (1) model

Physical Protection Plan for Radioactive Sources

The Licensee shall consider the following elements when creating or updating a physical protection plan:

First: Objectives of the Physical Protection Plan:

Second: Laws and regulations related to the security of radiation sources:

Third: General description of the facility:

1. Locate the facility and describe its surroundings.
2. Detailed facility diagram
3. Determine the nature of the facility's work.
4. The organizational structure of the facility.

Fourth: General description of radiation sources:

1. Determine the number, type, description and classification of radioactive sources from a nuclear security perspective and their uses.
2. Determine the places of circulation of radiation sources in detail.
3. Identify persons authorized to enter the places of circulation of radiation sources.
4. Physical inventory procedures for radioactive sources.

Fifth: Training:

1. A training plan for employees of the physical protection system in the facility and its objectives.
2. Training programs related to the security of radiation sources.
3. The mechanism of evaluating the training plan in achieving its objectives.

Sixth: Physical Protection Officer:

1. Determine who is responsible for the physical protection system and its data.
2. Qualification and training obtained.

Seventh: Physical Protection Measures:

1. A diagram of the locations of physical protection devices in the facility.
2. Identify applicable physical barriers to the protection of radiation sources and related information.
3. Access control measures:

- I.** Determine the entry and exit points in the facility for individuals and vehicles and the mechanism for monitoring these points.
- II.** Identify the places that require a permit to enter and the places available within the facility for the presence of unauthorized persons.
- III.** Determine the means and devices of access control to the places of circulation of radiation sources and related information and how to provide protection for these devices.
- IV.** Procedures for entering the places of circulation of radiation sources and related information.
- V.** Procedures for obtaining a permit to enter the places of circulation of radiation sources and related information.
- VI.** Procedures for the entry of unauthorized persons to the facility (such as being accompanied by an authorized person).
- VII.** Procedures for vehicles to enter the facility.
- 4.** Measures to detect unauthorized access:
 - A.** Determine the means and devices for detecting unauthorized access to the places of circulation of radiation sources and related information and how to provide protection for these devices.
 - B.** Mechanism for evaluating warnings.
- 5.** Key and access card control measures:
 - A.** Procedures for issuing, canceling, repairing, replacement, using or changing keys and access cards.
 - B.** Procedures for controlling the circulation of these keys and cards between authorized persons.
- 6.** Trust verification procedures.
- 7.** Maintenance and testing of physical protection devices:
 - I.** Specify the maintenance administrator.
 - II.** Maintenance and testing procedures for physical protection devices, including the preparation of a schedule for maintenance and testing.
 - III.** Procedures for repairing or replacing defective devices (if they malfunction) in the shortest possible time.
 - IV.** Compensatory measures in the event of a failure or maintenance of physical protection devices .
- 8.** Response measures to events related to nuclear security:

- I.** Mechanism and procedures for reporting events related to nuclear security.
 - II.** Procedures for responding to events related to nuclear security.
 - III.** Advance arrangements with the response forces to these events.
- 9.** Information Security:
- I.** Identify information relevant to the security of radiation sources to be protected.
 - II.** Determine the duration of retention of this information and ways to dispose of it.
 - III.** The mechanism of circulation of this information between authorized persons in accordance with the principle of knowledge as needed.
 - IV.** Ways in which this information is stored.
 - V.** Measures to protect this information.
- 10.** Security personnel:
- A.** Determine the roles and responsibilities of the facility's security personnel in protecting the places of circulation of radioactive sources in terms of access control, warning evaluation, protection of physical protection devices and initial response to events related to nuclear security.
 - B.** Training obtained.

Eighth: Additional Measures:

- 1. Additional measures applicable to mobile radiation sources while they are in circulation outside the facility.
- 2. Additional measures to counter the increase in the level of potential threats.
- 3. Security measures followed during unusual work situations, such as emergencies, for workers, contractors and visitors, and the restrictions that may be imposed on each of them.

Ninth: Evaluation Procedures:

- 1. Mechanism for evaluating the effectiveness and efficiency of the physical protection system.