



National Report on the Measures Taken
by Kuwait to Fulfill the Obligations
Laid Down in the:

“CONVENTION ON NUCLEAR SAFETY”

To the

Joint 8th and 9th Review Meeting of the
Contracting
Parties in 2023

*The Radiation Protection Department (RPD) on behalf of the Government of
Kuwait produced this report*

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Glossary

- MOH: Ministry of Health
- RPD: Radiation Protection Department
- MOU: Memorandum of Understanding
- NPP: Nuclear Power Plant
- IAEA: International Atomic Energy Agency
- BSS: Basic Safety Standards
- GSR: General Safety Requirements
- SSR: Specific Safety Requirements
- NORM: Naturally Occurring Radioactive Materials
- KOC: Kuwait Oil Company

Introduction

Kuwait has no operating nuclear power plants or research reactors in its territory and there are no plans at present to implement any nuclear power program in the foreseeable future. However, there are significant developments regarding the deployment of nuclear power in the region and in neighbouring countries, which make it necessary for the Government of Kuwait to accord the highest attention to the implementation of the Convention on Nuclear Safety (CNS) as an important mechanism supporting on-going international efforts towards fostering a global nuclear safety culture.

Kuwait's primary interest in and commitment to the Convention relates primarily to environmental and health concerns arising from the operation of nuclear power plants in the region at large and in the country's neighborhood in particular. In this context, the Government is very supportive of an effective implementation of the Convention focusing primarily its attention on all aspects related to the safety of nuclear installations and the environmental impact and health consequences of possible nuclear accidents that may occur from the operation of nuclear power plants in Kuwait's neighborhood.

Summary

The present National Report is presented by Kuwait to the 8th and 9th Review Meeting of the Contracting Parties of the Convention on Nuclear Safety.

The format of the report follows the structure given in the IAEA guidelines (Information Circular INFCIRC/572/Rev.5). As Kuwait does not operate any nuclear installation as defined in Article 2 of the Convention and has no plans to establish any nuclear installation in its territory in the near future, several Articles of the Convention are not relevant to the country and the related obligations are therefore not applicable. The report addresses Articles of the Convention, as deemed appropriate to illustrate progress made and achievements accomplished by Kuwait. Reporting is on all aspects pertaining to the national legislative and regulatory framework relevant to the commitment of the country to the Convention's objective as Contracting Party with no nuclear installations planned or in operation.

Kuwait does not have a Law or regulations specific only to nuclear materials or installations. However, the current regulatory system covers all aspects of radiation sources, which by nature will include all nuclear materials.

Any user of a radiation source must obtain a license before the import, export, use, disposal or storage of such sources. Every licensee is granted a license document, which includes an inventory of all the radiation sources. Any import or export of radiation sources also requires a separate approval to perform that activity and there is an MOU between the regulatory body and Kuwait Customs Department regarding this subject. The conditions for obtaining these licenses are in the national Law and subsidiary Ministerial Decrees, which take into account the safety and security of these sources during use, transport, and disposal. These provisions are in line with the IAEA general and specific safety standards. Kuwait does not have or operate a national waste facility. By regulatory requirements, all radiation sources must be sent back to the manufacturer or to a waste facility outside the country.

The main national Law 131/1977 "The Control of the Use of Ionizing Radiation and Protection from the Hazards Thereof" is currently in the process of being updated to provide the legal basis for strengthening further the national regulatory framework in compliance with IAEA standards and international best regulatory practice with respect to nuclear and radiation safety and nuclear security.

CNS Requirements Articles 6-19

Article 6: Existing Nuclear Installations

Each Contracting Party shall take the appropriate steps to ensure that the safety of nuclear installations existing at the time the Convention enters into force for that Contracting Party is reviewed as soon as possible. When necessary in the context of this Convention, the Contracting Party shall ensure that all reasonably practicable improvements are made as a matter of urgency to upgrade the safety of the nuclear installation. If such upgrading cannot be achieved, plans should be implemented to shut down the nuclear installation as soon as practically possible. The timing of the shut-down may take into account the whole energy context and possible alternatives as well as the social, environmental and economic impact.

Kuwait has not operated in the past any nuclear installation as defined in Article 2 of the Convention and no nuclear installation exists at present in its territory. Therefore, the requirement for Article 6 is not applicable for Kuwait.

Article 7: Legislative and Regulatory Framework

1. Each Contracting Party shall establish and maintain a legislative and regulatory framework to govern the safety of nuclear installations.
2. The legislative and regulatory framework shall provide for:
 - i. the establishment of applicable national safety requirements and regulations;
 - ii. a system of licensing with regard to nuclear installations and the prohibition of the operation of a nuclear installation without a licence;
 - iii. a system of regulatory inspection and assessment of nuclear installations to ascertain compliance with applicable regulations and the terms of licences;
 - iv. the enforcement of applicable regulations and of the terms of licences, including suspension, modification or revocation.

The Amiri Decree No.131/1977 ("The Control of the Use of Ionizing Radiation and Protection from the Hazards Thereof") establishes the legal basis for the uses of radioactive sources and nuclear material in Kuwait and the subsidiary regulations (Ministerial Decisions) and procedures form a strong regulatory and enforcement system, in line with the International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources (BSS).

As Kuwait has no nuclear power reactors in operation and the deployment of nuclear power is not considered at present as an option in the short and medium terms, the current national nuclear legislative and regulatory framework does not include any specific provisions to govern the safety of nuclear installations. The focus is on enforcing radiation safety standards through an effective regulatory control of radioactive and nuclear materials. The regulatory system in place governs the import, export, use, and storage of ALL radiation sources (which includes nuclear materials).

The Amiri Decree No. 131/1977 "The Control of the Use of Ionizing Radiation and Protection from the Hazards Thereof" provides that no radiation device or radioactive substance may be imported, exported, manufactured, possessed, bought, sold, transported or disposed of, without

obtaining a licence for the purpose from the Ministry of Health. The conditions, procedures, and the periods of validity of the licence are laid down by an executive Decree of the Minister of Health.

Under Amiri Law no. 131/1977 - Article 6, a National Radiation Protection Committee (Regulatory Body) was created. The Committee is responsible for all matters pertaining to licensing, regulating, proposing, and implementing the regulations that deal with ionizing radiation. Furthermore, a Radiation Protection Division (RPD) was established at the Ministry of Health with the aim to implement radiation protection practices in the fields of medicine, industry and research. The Committee is authorized by Law to delegate some or all of its duties to the RPD. The legal part of the Ministry's authority is delegated to the Committee for issuing licences and the technical part of the authority is delegated to the RPD. All radioactive material and radiation sources used in Kuwait are under the regulatory supervision of the RPD.

The legislative and regulatory framework includes:

- (i) Amiri Law 131/1977 - Articles 2 and 3 and Ministerial Decrees that provide for these Articles (552/2003, 225/2005, 553/2003, 399/2016)
In summary, these Articles and Decrees state that it is prohibited to possess, use, import, export, store, buy, or sell any radiation sources without acquiring a proper license for the said activities.
- (ii) Amiri Law 131/1977 – Articles 2 and 3
Article 3 states that it is prohibited to possess, use, import, export, store, buy, or sell any radiation sources without acquiring a proper license for the said activities.
- (iii) Amiri Law 131/1977 - Articles 7 and 14
The competent authority (Radiation Protection Department) shall manage the licensing, regulatory monitoring, and inspections on radiation sources, storage locations, and workers who deal with or use radiation sources.
- (iv) Amiri Law 131/1977 - Article 4, 9, 10, 14
The regulatory body has the right to revoke a license if the licensee did not adhere to the licensing requirements which include the safety requirements for both workers and the environment. They have the right to issue an official violation and the right of repossession of any or all radiation sources if the need arises under any violations.

The implementations details for licensing requirements and distribution of responsibilities between the regulatory body, the competent authority, and licensees are mentioned in detail in Ministerial Decrees.

Article 8: Regulatory Body

1. Each Contracting Party shall establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework referred to in Article 7, and provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities.
2. Each Contracting Party shall take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy.

The Amiri Decree No.131/1977 establishes the National Radiation Protection Committee which consists of members from all the governmental bodies with concern of radiation protection such as the Ministry of Health, Ministry of Electricity and Water, Kuwait University, Kuwait Institute of Scientific Research, Public Environmental Protection Authority, and Civil Defense.

The same Decree assigns the Ministry of Health as the National Regulatory Authority, which in turn authorizes the National Radiation Protection Committee and the Radiation Protection Department (RPD) to carry out various tasks. The legal part of the Ministry's authority is delegated to the National Radiation Protection Committee for issuing licences and the technical part of the authority is delegated to the RPD.

The regulatory body in Kuwait is comprised of two entities:

- National Radiation Protection Committee whose responsibilities are outlined in Law 131/1977 – Article 6. The Committee issues various licences, including personal licences, licences to import radioactive sources & equipment, export licences, licences for users and storage licences.
- Radiation Protection Department (RPD). Responsible for the implementation of national radiation Law 131/1977 and all subsidiary regulations, pursuant to Law 131/1977 – Article 7 and Ministerial Decree 598/2015.

Article 9: Responsibility of the License Holder

Each Contracting Party shall ensure that prime responsibility for the safety of a nuclear installation rests with the holder of the relevant licence and shall take the appropriate steps to ensure that each such licence holder meets its responsibility.

As Kuwait has not operated in the past and does not operate at present in its territory any nuclear installation as defined in Article 2 of the Convention, the requirement for Article 9 is not applicable.

With regard to radioactive material and radiation sources, any activity needs an operating license in Kuwait. The license holder has to fulfil regulatory requirements and comply with conditions and obligations specified with the license.

The responsibility for the safety of any radiation source (including nuclear when applicable) rests with the licensee. The RPD periodically inspects safety and security procedures in place

for licensees to check if they adhere to the requirements spelt out in regulations. The requirements are stated in Amiri Law 131/1977 – Articles 4,5. The implementation details are specified in Chapter 3 of Ministerial Decree 552/2003 and are enforced by the regulatory body through regular and surprise inspections.

- Ministerial Decree 552/2003 - Chapter 3:
 - Article 15: Availability of safety and security requirements is a condition to the issuance and continued use of a license.
 - Articles 16-23: details the safety and security requirements that the licensee shall adhere to.

Article 10: Priority to Safety

Each Contracting Party shall take the appropriate steps to ensure that all organizations engaged in activities directly related to nuclear installations shall establish policies that give due priority to nuclear safety.

As Kuwait does not have any nuclear installations or research reactors, prioritising safety is being pursued through the enforcement of safety standards on radioactive material and radiation sources used in the industrial, medical, and research fields. The safety and security requirements are stated in Article 4 of Amiri Law 131/1977 and detailed in Chapters 3 to 7 of Ministerial Decree 552/2003, which covers medical, industrial, and research radiation sources.

- Chapter 3 deals with general safety and security requirements.
- Chapter 4 deals with protection from occupational exposure.
- Chapter 5 deals with medical exposure.
- Chapter 6 deals with the protection of the public.
- Chapter 7 deals with security of radiation sources.

Article 11: Financial and Human Resources

1. Each Contracting Party shall take the appropriate steps to ensure that adequate financial resources are available to support the safety of each nuclear installation throughout its life.
2. Each Contracting Party shall take the appropriate steps to ensure that sufficient numbers of qualified staff with appropriate education, training and retraining are available for all safety-related activities in or for each nuclear installation, throughout its life.

As Kuwait has not operated in the past and does not operate at present in its territory any nuclear installation as defined in Article 2 of the Convention, the obligation under Article 11 is not applicable.

Article 12: Human Factors

Each Contracting Party shall take the appropriate steps to ensure that the capabilities and limitations of human performance are taken into account throughout the life of a nuclear installation.

As Kuwait has not operated in the past and does not operate at present in its territory any nuclear installation as defined in Article 2 of the Convention, the obligation under Article 12 is not applicable.

With regard to the regulatory aspects related to radioactive material and radiation sources, any radiation worker is required to obtain a personal license from the Radiation Protection Department (RPD) in order to perform his duties involving radiation sources. One of the requirements for obtaining such license is proper training on radiation safety from an accredited training provider. Furthermore, surprise inspections help ensure that licensees adhere to the safety and security plans when working with radiation sources.

Article 13: Quality Assurance

Each Contracting Party shall take the appropriate steps to ensure that quality assurance programs are established and implemented with a view to providing confidence that specified requirements for all activities important to nuclear safety are satisfied throughout the life of a nuclear installation.

As Kuwait has not operated in the past and does not operate at present in its territory any nuclear installation as defined in Article 2 of the Convention, the obligation under Article 13 is not applicable.

With regard to the regulatory aspects related to radioactive material and radiation sources, all licensees shall have a quality assurance program in place as part of the licensing requirements. The quality assurance program should take into account how to minimize occupational exposure if possible. The details of this requirement are in Ministerial Decree 552/2003, Chapter 5, Article 45.

Article 14: Assessment and Verification of Safety

Each Contracting Party shall take the appropriate steps to ensure that:

- i. comprehensive and systematic safety assessments are carried out before the construction and commissioning of a nuclear installation and throughout its life. Such assessments shall be well documented, subsequently updated in the light of operating experience and significant new safety information, and reviewed under the authority of the regulatory body;
- II. verification by analysis, surveillance, testing and inspection is carried out to ensure that the physical state and the operation of a nuclear installation continue to be in accordance with its design, applicable national safety requirements, and operational limits and conditions.

As Kuwait has not operated in the past and does not operate at present in its territory any nuclear installation as defined in Article 2 of the Convention, the obligation under Article 14 is not applicable.

However, with regard to the regulatory aspects related to radioactive material and radiation sources, according to Ministerial Decree 552/2003, the regulatory body performs safety and security assessments on all new and existing facilities that work with ionizing radiation in order to control the compliance with the specific regulatory requirements associated with the granted license. Construction plans are assessed before providing a storage or workplace license. In addition, periodic inspections are performed on workplaces to make sure the safety and security procedures are still in place.

Article 15: Radiation Protection

Each Contracting Party shall take the appropriate steps to ensure that in all operational states the radiation exposure to the workers and the public caused by a nuclear installation shall be kept as low as reasonably achievable and that no individual shall be exposed to radiation doses which exceed prescribed national dose limits.

As Kuwait has not operated in the past and does not operate at present in its territory any nuclear installation as defined in Article 2 of the Convention, the obligation under Article 15 is not applicable.

The national legislation in place aims at protecting people and the environment against the hazards of ionising radiation related to the use of radioactive material and radiation sources. Pursuant to Amiri Law 131/1977 – Article 4 and Ministerial Decree 552/2003 Chapter 1, Articles 4 and 9, all licensees shall follow the ALARA principle in their daily work practices. Furthermore, Article 10 of Decree 552/2003 forces licensees to adhere to the national dose limits.

Article 16: Emergency Preparedness

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| <ol style="list-style-type: none">1. Each Contracting Party shall take the appropriate steps to ensure that there are on-site and off-site emergency plans that are routinely tested for nuclear installations and cover the activities to be carried out in the event of an emergency.
For any new nuclear installation, such plans shall be prepared and tested before it commences operation above a low power level agreed by the regulatory body.2. Each Contracting Party shall take the appropriate steps to ensure that, insofar as they are likely to be affected by a radiological emergency, its own population and the competent authorities of the States in the vicinity of the nuclear installation are provided with appropriate information for emergency planning and response.3. Contracting Parties which do not have a nuclear installation on their territory, insofar as they are likely to be affected in the event of a radiological emergency at a nuclear installation in the vicinity, shall take the appropriate steps for the preparation and testing of emergency plans for their territory that cover the activities to be carried out in the event of such an emergency. |
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Provisions concerning radiological emergency situations are contained in the Amiri Decree 131 of 1977. The Decree establishes the Ministry of Health (MOH) as the ministry responsible for the protection of the public against all radiation potential hazards, while the Ministry of Health and the Ministry of Interior – Civil Defense are the responsible authorities for managing nuclear and radiological emergencies. The Civil Defense (Ministry of Interior) is assigned the legal responsibility during all kinds of emergency in Kuwait, including radiological emergencies.

Pursuant to the Council of Ministers Decision 897/1997, the Emergency Committee of the Civil Defense is the highest authority during emergency and has the power to activate the emergency response plan to any accident on the nation wide level. The Emergency Committee of the Civil Defense assigned the Radiation Emergency Committee to direct the response during radiation related emergencies.

- Ministry of Interior’s Decree 235/2013 updates and expands the membership of the Radiation Emergency Committee to include sixteen relevant national organizations.
- Ministry of Interior’s Decree 1094/2014 establishes the first responders team.

Kuwait has a National Radiation Emergency Plan in place that covers a wide range of radiation emergencies except local facilities since they do not exist in the country. The Laws governing the national emergency plan and its establishment are Amiri Law 131/1977 – Article 8, Ministerial Decree 552/2003 Chapter 7, and Civil Defense Law 21/1979. The national emergency plan document includes the emergency plan itself and the procedures and responsibilities of each authority for preparedness and response. The plan takes into account nuclear accidents that might occur in any of the neighboring states. As such, emergency procedures are in place and national authorities trained to respond according to the plan in case an accident happens. Different emergency categories are detailed in the plan which includes NPP accidents from neighboring countries and terrorist activities.

Article 17: Siting

Each Contracting Party shall take the appropriate steps to ensure that appropriate procedures are established and implemented:

- I. for evaluating all relevant site-related factors likely to affect the safety of a nuclear installation for its projected lifetime;
- II. for evaluating the likely safety impact of a proposed nuclear installation on individuals, society and the environment;
- III.** for re-evaluating as necessary all relevant factors referred to in sub-paragraphs (i) and (ii) so as to ensure the continued safety acceptability of the nuclear installation;
- IV.** for consulting Contracting Parties in the vicinity of a proposed nuclear installation, insofar as they are likely to be affected by that installation and, upon request providing the necessary information to such Contracting Parties, in order to enable them to evaluate and make their own assessment of the likely safety impact on their own territory of the nuclear installation.

Not relevant to the country at the current time. As Kuwait does not operate any nuclear installation as defined in Article 2 of the Convention and has no plans to establish any nuclear installation in its territory in the near future, the obligation under Article 17 is not applicable.

Article 18: Design and Construction

Each Contracting Party shall take the appropriate steps to ensure that:

- I. the design and construction of a nuclear installation provides for several reliable levels and methods of protection (defense in depth) against the release of radioactive materials, with a view to preventing the occurrence of accidents and to mitigating their radiological consequences should they occur;
- II. the technologies incorporated in the design and construction of a nuclear installation are proven by experience or qualified by testing or analysis;
- III. the design of a nuclear installation allows for reliable, stable and easily manageable operation, with specific consideration of human factors and the man-machine interface.

Not relevant to the country at the current time. As Kuwait does not operate any nuclear installation as defined in Article 2 of the Convention and has no plans to establish any nuclear installation in its territory in the near future, the obligation under Article 18 is not applicable.

Article 19: Design and Construction

Each Contracting Party shall take the appropriate steps to ensure that:

- I. the initial authorization to operate a nuclear installation is based upon an appropriate safety analysis and a commissioning programme demonstrating that the installation, as constructed, is consistent with design and safety requirements;
- II. operational limits and conditions derived from the safety analysis, tests and operational experience are defined and revised as necessary for identifying safe boundaries for operation;
- III. operation, maintenance, inspection and testing of a nuclear installation are conducted in accordance with approved procedures;
- IV. procedures are established for responding to anticipated operational occurrences and to accidents;
- V. necessary engineering and technical support in all safety-related fields is available throughout the lifetime of a nuclear installation;
- VI. incidents significant to safety are reported in a timely manner by the holder of the relevant license to the regulatory body;
- VII. programmes to collect and analyse operating experience are established, the results obtained and the conclusions drawn are acted upon and that existing mechanisms are used to share important experience with international bodies and with other operating organizations and regulatory bodies;
- VIII. the generation of radioactive waste resulting from the operation of a nuclear installation is kept to the minimum practicable for the process concerned, both in activity and in volume, and any necessary treatment and storage of spent fuel and waste directly related to the operation and on the same site as that of the nuclear installation take into consideration conditioning and disposal.

Not relevant to the country at the current time. As Kuwait has no plans to establish in its territory in the near future any nuclear installation as defined in Article 2 of the Convention, the obligation under Article 19 is not applicable.

Appendix I: List of Agreements in the Field of Nuclear Safety and Radiation Protection

A. International Treaties Adopted Under IAEA Auspices

	Title	Status	In Force
1	Convention on the Physical Protection of Nuclear Material	Accession	23 May 2004
2	Convention on Early Notification of a Nuclear Accident	Accession	13 June 2003
3	Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency	Accession	13 June 2003
4	Convention on Nuclear Safety	Accession	09 August 2006
5	Amendment to the Convention on the Physical Protection of Nuclear Material accession (CPPNM)	Accession	01 April 2016

B. Bilateral Agreements

Cooperation Agreement between the Government of the State of Kuwait and the Government of the French Republic for the Peaceful Uses of Nuclear Energy

C. Memorandums of Understanding (MOUs)

- 1- MOU between the regulatory body and Kuwait Customs Department
- 2- MOU between the regulatory body and KOC mutually cooperate towards the execution and implementation of NORM, Ionizing and Non-Ionizing Radiation Management from Oil and Gas Production in KOC, to ensure that workforce and common public are not exposed to above permissible radiation and to prevent environment pollution with radioactive materials

Appendix II: List of Laws and Regulations in the Field of Nuclear Safety and Radiation Protection

Laws

1. Amiri Decree No. 131 of 1977 The Control of the Use of Ionizing Radiation and Protection from the Hazards Thereof (is the basic Law that gives authority to the Ministry of Health, which in turn authorized the Radiation Protection Committee to issue licenses and the Radiation Protection Department to perform the related technical duties).
2. Amiri Decree 21/1979 assigned the Civil Defense (Ministry of Interior) as the legal responsible authority during all kinds of emergency in Kuwait, including radiological emergencies.

Ministry of Health Decrees

1. Ministerial Decree 552/2003 - Organization of the use of ionizing radiation procedures and safety aspects from the hazards thereof
2. Ministerial Decree 553/2003 - Regulations, conditions and safety procedures to be followed for radioactive waste disposal and storage
3. Ministerial Decree 225/2005 - The Transportation of Radioactive Materials
4. Ministerial Decree 194/2011 regarding limitations of concentration of radioactive isotopes in foodstuff, drinking water and animals foods during emergency.
5. Ministerial Decree 144/2014 on the security of radioactive sources
6. Ministerial Decree No 598/2003 The Reorganization of the Department of Radiation Protection And set its Terms of Reference
7. Ministerial Decree 399/2016 Regarding qualification and experience needed by the licensees in the field of Radiation
8. Ministerial Decree 305/2015 Regarding Restructure the committee on Radiation Committee
9. Ministerial Decree 54/2017 Regarding The power of supervision and inspection and the prescription of judicial officers to Radiation Protection Department worker
10. Ministerial Decree 39/2019 Regarding guides level for the patient dose of x ray equipment

Ministry of Interior's Decrees

1. Pursuant to the Council of Ministers Decision 897/1997, the Emergency Committee of the Civil Defense is the highest authority during emergency and has the power to activate the emergency response plan to any accident on the nationwide level. The Emergency Committee of the Civil Defense assigned the Radiation Emergency Committee to direct the response during radiation related emergencies.
2. Ministry of Interior's Decree 235/2013 updates and expands the membership of the Radiation Emergency Committee to include sixteen organizations
3. Ministry of Interior's Decree 1094/2014 establishes the first responders team
4. National Emergency Plan To respond to nuclear and radiological accidents 2017
5. General procedures For assessment and response in radiological and nuclear emergencies 2017