

I-NRC's National Role in Strengthening Regulatory Practices for Secure Transport of Radioactive Sources



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Objective:

The objective of clarifying the scope of licensing and reviewing the regulatory authority's procedures is to ensure safe, transparent, and efficient licensing for the transport of radioactive materials by:

- Reinforcing the importance of radioactive material transport licenses compared to other radiation practices.
- Involving multiple entities (legal, financial, administrative, and audit) within the regulatory authority in issuing licenses to ensure strict oversight consistent with national and international standards.
- Enhancing the role of digital oversight through systems such as RAIS 3.4 for the transport of radioactive materials.
- Streamlining procedures by reducing the processing time for license applications through a parallel workflow while maintaining accurate reviews.



Introduction:

Nuclear and radioactive materials are transported worldwide for use in medicine, industry, research, and energy production. Vehicles carrying radioactive material travel through public areas, making them targets for thieves or susceptible to accidents and loss. So this indicates that transport is often the weakest link in the security chain, as adversaries may find it easier to intercept materials in transit than to breach a secure facility. So the transport of nuclear and radioactive materials is a critical process that requires the highest levels of security and safety. So the regulatory frameworks and corrective actions are applied (both national and international), and advanced security technologies are used (Locks, GPS tracking, radiation detection, tamper-evident containers, etc.).

Historical Development of Nuclear and Radioactive Materials Regulations in Transportation in Iraq

Radiation Protection Law No. 99 of 1980

One of Iraq's earliest laws regulating the transport and control of radioactive materials.

Order 72 (2004)

Reorganized the Iraqi Radioactive Sources Regulatory Authority (IRSRA) to oversee all radioactive material management.

Instructions for the Security Transport of Radioactive Sources No. (2)

Instructions of the Iraqi Radioactive Sources Regulatory Authority (IRSRA) (before 2024)

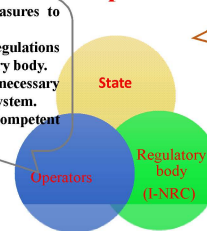
I-NRC Establishment Law – 2024

Established the Iraqi Nuclear, Radiological, Chemical, Biological Regulatory Commission (I-NRC), which oversees the safe and security transport of nuclear, radiological, biological, and chemical materials.



- Take the required measures to secure RS
- implement the regulations assigned by the regulatory body.
- Provide the necessary equipment for security system.
- Cooperation with competent authorities.

Responsibilities

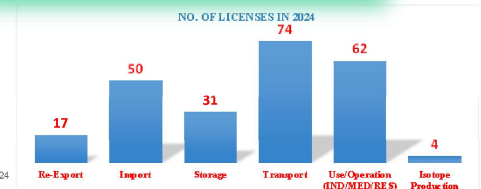


- Draw the general security policies framework.
- study probable threat
- Delegation authority to competent authorities for security of RS.
- give the necessary support to the competent authorities.

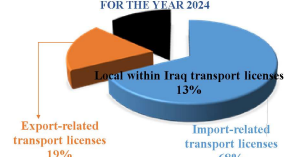
- provide regulations and laws relevant with security of RS
- Conduct the inspection and assessment mission to insure the security management.
- Enforce law and regulations on operators.

Results

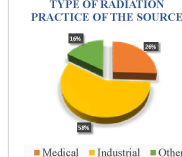
The increasing number of transportation licenses granted in recent years is an indicator of the importance of this vital activity and the regulatory body's success in promoting a safe environment that complies with international standards, ensuring the protection of workers, the public, and the environment. Unlike storage or use of radioactive sources within facilities, transportation requires multi-agency coordination (regulatory body, security agencies, transportation companies, and the end beneficiary).



TYPE OF TRANSPORT LICENSES ISSUED FOR THE YEAR 2024



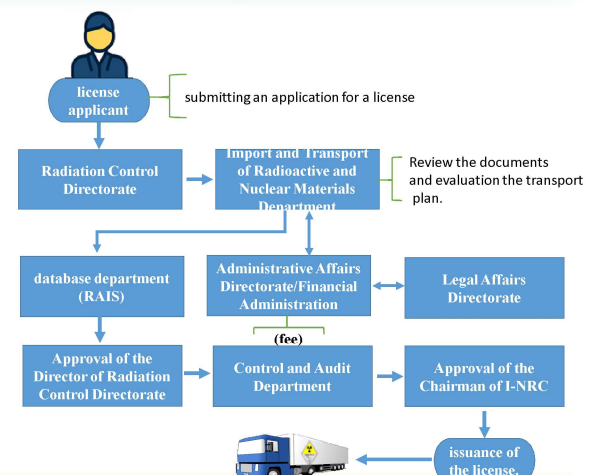
TYPE OF RADIATION PRACTICE OF THE SOURCE



Training and qualifying No. of persons from I-NRC

Outside Iraq training		
year	courses	E-Learning
2020	0	0
2021	0	0
2022	2	3
2023	8	0
2024	12	5
Total	30	

Flowchart of the I-NRC procedures for granting licenses for the transport of radioactive sources



In 2024, the National Commission for Nuclear, Radiological, Chemical, and Biological Control (I-NRC) supervised multiple transport operations of radioactive sources, amounting to more than **53,648** sources across different categories and security levels. All transport operations were conducted in accordance with national regulations and instructions issued by the I-NRC, and in line with the standards of the International Atomic Energy Agency (IAEA).

The supervision process included prior review of transport plans, monitoring compliance with radiation safety and physical security requirements, and verifying the readiness of transport equipment. In addition, personnel involved in the transport operations were trained in emergency procedures and response measures for potential incidents.

No observations or incidents related to security discipline or safety were recorded, whether for the workers or the general public.

Conclusions:

The radioactive material transport operations in Iraq have significantly increased in recent years, reflecting the growing use of radioactive sources, particularly in the medical sector and the industrial/oil sector

The I-NRC has upgraded its regulatory and oversight systems in line with the recommendations of the International Atomic Energy Agency (IAEA), including the implementation of the RAIS system and updated transport databases. Procedures for obtaining a transport license have been developed and simplified, while strictly adhering to national and international standards.

As a result of comprehensive safety and security measures, no radiological incidents have been recorded during transport operations over the studied period, underscoring the effectiveness of Iraq's regulatory framework.