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Status of the Libyan Regulatory Infrastructure And Activities

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BACKGROUND

Libyan concern about radiation safety and control of radioactive sources had started about 30 years ago where in 1982 the Law on regulation related to the use of ionizing radiation and protection against its hazards (Act No.2) was issued.

- ❑ In 1982, a National Commission on Radiation Protection was established according to Act No.2.
 - Regulatory activities, such as registration, licensing and inspection, were assigned to the department Radiation protection and Health Physics within Tajoura Nuclear Research Centre.



BACKGROUND

- ❑ **The office of nuclear and radiation safety** was established in 2001.
- ❑ In 2005 the office became "***The Nuclear Safety and Security section***" one of the national Bureau for scientific research.
- ❑ In 2008 the Nuclear Safety and Security section became one of the Libyan Atomic Energy Establishment offices named "**The Nuclear Regulatory Office**" (NRO).



FACILITIES AND ACTIVITIES

1) Tadjoura Nuclear Research Center (TNRC)

- 10 MW, pool type reactor (TR1), used for basic research and a critical facility, which is a mockup of the reactor used mainly for training purposes and teaching.
- The reactor started operation in Aug. 1981 with HEU fuel and was converted to LEU fuel in Oct. 2006.
- Fuel storage facilities.
- Waste treatment facility.
- A 14 Mev neutron generator.
- Gamma irradiation facility used for research.
- (SSDL) for calibration



FACILITIES AND ACTIVITIES

2) Radioactive Sources and Devices

▪ Research Applications:

- Radiation sources are used by some universities and research centers for teaching and research.

▪ Industrial Applications:

- Radioactive sources and devices are used in industry mainly for:
 - Industrial radiography.
 - Well logging.
 - Gages.



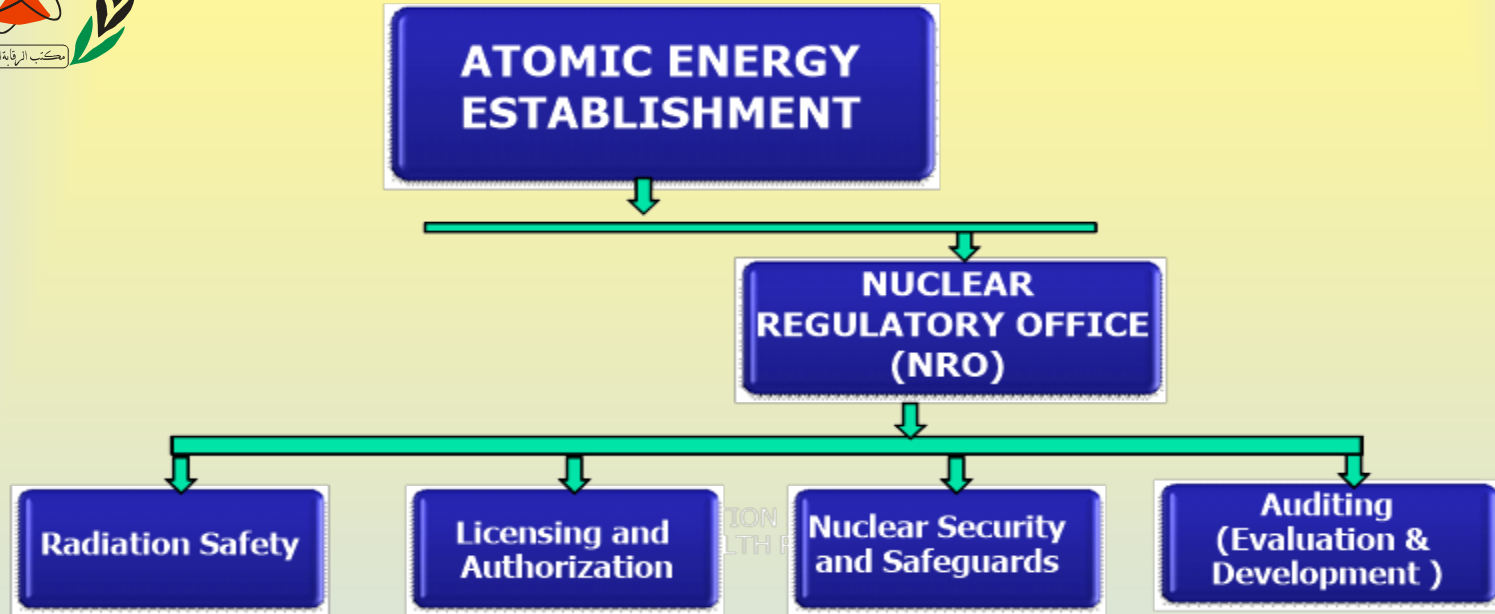
FACILITIES AND ACTIVITIES

■ **Medical Applications:**

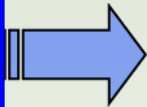
- There are a number of hospitals and medical centers which use radiation sources in radiology and radiotherapy.
 - There are five medical centers using radiation sources for diagnostics and treatment; (three in Tripoli, one in Benghazi, and one in Sabrata).
 - Two more centers are under construction, one in Benghazi, and one in Musrata.



NRO STRUCTURE and DUTIES



Summary of the
NRO Duties



- Regulatory control of Facilities and activities.
- Registration and Licensing.
- Inspection
- Preparation of Rules, Regulations and Guides.
- Development of standards.
- Authorize transportation of sources and materials.



National Legislative Framework

Laws and Regulations

- Act#2, 1982, The use of Radiation Sources, and protection against Ionizing radiation.
- Act#4, 2005, Transportation of dangerous materials on the national roads.
- National Safety Regulations based on act #2.

A working committee was established to review the current legislation, and formulate a national nuclear law, which will cover all Practices and activities, and includes the establishment of an independent Nuclear regulatory authority.



National Legislative Framework

- ✓ The committee has prepared a draft of the national nuclear law.
- ✓ The draft covers all the relevant aspects which include the following:
 1. Establishing an independent Regulatory Authority.
 2. Radiation Safety.
 3. Nuclear Safety and security.
 4. Radioactive waste management.
 5. National emergency preparedness and response.
 6. Transport of radioactive materials.



NRO ACTIVITIES and REQUIREMENTS

RADIATION SOURCES

Radioactive sources are being used in different areas of applications (medical, industry, etc.)

NRO Activities

- ✓ Registration
- ✓ Licensing (Sources & Devices)
- ✓ Inspection

NRO Requirements

- Fill & Submit Forms
- Source Data and Documents
- Radiation officer
- Transport plan
- Physical protection plan
- Radiation protection plan



NRO STAFF AND TRAINING

1. There are **22** staff members in the Nuclear regulatory Office more than 15 of them are newly graduated and need to be properly trained to participate in carrying out the NRO duties and responsibilities.
2. Training program for NRO staff is divided into two levels:
 - General training program for all staff members.
 - Specialized training program depending on the specific group duties and functions.



NRO Regulation

According to the national regulation it is required for all users of radiation sources and devices to re-export all sources back to the country of origin after use.

In some instances when disused sources or orphan sources are found , they are handled through Radiation Protection dep. and storage the sources in the radioactive sources store in TNRC



THE NATIONAL REGISTER

- The Nuclear Regulatory Office developed and maintains a national system to manage all relevant regulatory information related to it's activities which include:
 - NRO staff and activities.
 - Nuclear and Radiation Facilities.
 - Radioactive Sources and Devices.
- Accounting system for control of nuclear material under safeguards agreement.
- 129 Entities are currently registered with the NRO.



THE NATIONAL REGISTER

Form 1

منظومة مكتب الرقابة النووية



مكتب الرقابة النووية

اسم المستخدم

كلمة المرور

موافق

خروج

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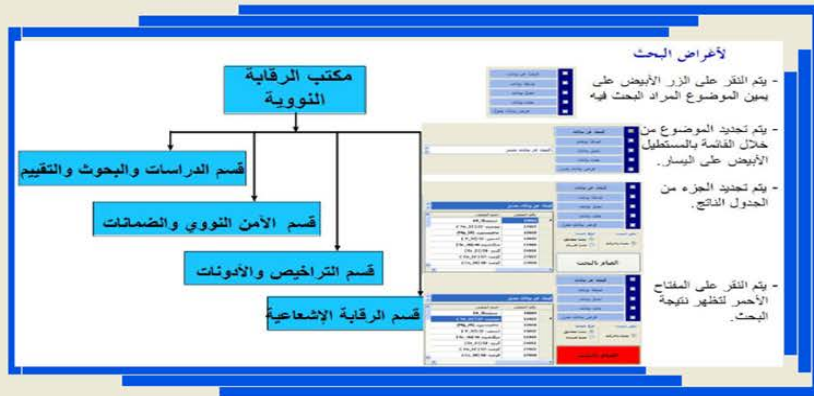


THE NATIONAL REGISTER

تقارير عامة تقارير الافراج تقارير اعادة التصدير تحرير رسائل جديدة تقارير الموافقات المبدئية

ليبي

مؤسسة الطاقة الذرية
منظومة مكتب الرقابة النووية



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نوع البحث

بحث مطابق

بحث عام

نوع البحث

بحث بالرقم

بحث بالاسم

القيام بالبحث

روح



The web site & e-mail

The Nuclear Regulatory Office is one of the Libyan Atomic Energy Establishment (LAEE).

The web-page (site) for LAEE is :

<http://www.aee.gov.ly>

And the NRO e-mail is :

libyannro@aee.gov.ly



SUMMERY

- The Nuclear Regulatory Office is the national authority responsible for nuclear safety and security .
- The NRO is currently implementing a plan to further develop the necessary rules, regulations and guides related to nuclear safety and security to improve the national regulatory infrastructure.
- The Nuclear Regulatory Office is planning to improve the qualification and competence of its staff through training programs.
- Assistance of AAEA and IAEA and other international regulatory bodies in training is appreciated.

Thank you

