Official Journal - Issue No. 42 (Bis) - Dated 26 October 2011

Prime Minister Decree No. 1326 Of The Year 2011
On The Issuance Of The Executive Regulations Implementing The Law On Regulation Of Nuclear Activities And Radioactivity Promulgated By Law No. 7 Of The Year 2010

Prime Minister,

Having taking cognizance of the Constitutional Proclamation dated 13/2/2011;

The Constitutional Proclamation promulgated on 30/3/2011;

Law No. 59 of the year 1960 on the Regulation of the Work with Ionized Radiations and Protection from their Hazards;

Law on Regulation of Universities promulgated by Law No. 49 of the year 1972;

Law No. 13 of the year 1976 on the Establishment on Nuclear Plants Authority for Electricity;

Law No. 4 of the year 1994 on Environment;

Law No. 7 of the year 2010 on the Issuance of the Law on Regulation of Nuclear Activities and Radioactivity;

The Presidential Decree No. 288 of the year 1957 on the Formation of the Egyptian Atomic Energy Authority (EAEA);

The Presidential Decree No. 196 of the year 1977 on the establishment of the Nuclear Materials Authority;

The Presidential Decree No. 503 of the year 1977 on the affiliation of the Egyptian Atomic Energy Authority (EAEA) and Nuclear Materials Authority to the Minister of Electricity and Energy;

And based on the State Council decision;

IT HAS BEEN DECIDED AS FOLLOWS:

(Article One)

The provisions of the attached executive regulations of Law on the Regulation of Nuclear Activities and Radioactivity promulgated by Law No. 7 of the year 2010 shall apply.

(Article Two)

The present Decree shall be published in the Official Gazette and shall apply as of the day following the date of its publication.

Issued by the Cabinet of Ministers on 19 Dhul Qe'da 1432 (Islamic Calendar), corresponding to 17 October 2011 (Gregorian Calendar).

Prime Minister
Dr. Essam Sharaf

The Draft Executive Regulations Implementing The Law On Regulation Of Nuclear Activities And Radioactivity Promulgated By Law No. 7 of the year 2010

Part - 1

General Provisions

Article - 1

In application of the provisions of the present regulations, the following words shall have the meanings as are respectively assigned thereto:

The Law: Law on Regulation of Nuclear Activities and Radioactivity promulgated by Law No. 7 of the year 2010.

The Commission: Nuclear Regulatory Commission (NRC)

Article - 2

Chairman of the Commission shall assume the following competences alongside the competences set forth in Article (22) of the Law:

1- Carry out all procedures necessary for the implementation of the provisions of the Law, the current executive regulations, decrees implementing the same, regulations and the technical systems, standards and rules issued by the Commission in coordination and collaboration with other concerned bodies.

2- Follow-up the inspections of nuclear and radiation facilities, conducted by the Commission.

3- Oversee the preparation of all regulations organizing work at the Commission.

4- Follow-up the maintenance of a record keeping system for the Commission confidential records and adopt appropriate procedures for securing the Commission works.

5- Propose procedures to improve and develop the Commission performance and present the same to the board of directors.

6- Supervise the review and scrutiny of the nuclear and radiation security and safety reports, before the issuance of permits and licenses.

Article - 3

Applicants seeking permits, licenses or approvals from the Commission shall, in all cases, complain to the head of the Commission about the resolutions issued by the Commission, within 60 days of the date of their notification of the resolution of the Commission via a return-receipt requested mail, regarding such permits, licenses or approvals. The Commission head may discuss the reasons of the complaint with the aggrieved. In all cases, the complaints should be referred to the Commission board to decide thereon. Their decision in this regard shall be rendered final.

Part - 2

Licenses of Nuclear And Radiation Facilities

Chapter - 1
General Provisions

Article - 4

For the obtainment of a license to a nuclear or radiation facility, the following conditions stipulated in Article (27) of the Law shall be met. The Commission may verify the satisfaction of such conditions by various means, including the fixed and movable Commission stations.

The Commission shall oversee and inspect the nuclear and radiation facilities exercising activities that cause ionized radiation emissions, ensure the abidance by the license conditions and monitor the surrounding environment through an independent radiation monitoring via the Commission stations.

The Commission shall further perform the environmental measurements and monitoring of the radiation levels, within the Republic as well as sample laboratory measurements, when necessary, and collaborate with local and international device calibration accredited bodies. The Commission shall define in its systems and technical standards the safety requirements of each license phase, which shall be binding to the applicant.

The Commission shall issue one license to the facility for the acquisition and handling of nuclear materials and radioactive sources within the facility, after meeting all requirements, according to the type, size and nature of the nuclear activity and radioactivity of the facility.

Article - 5

License of nuclear or radiation facility shall be subject to the conditions and rules specified by the Commission at the technical systems issued thereby, potential risks that could occur due to the formation of the nuclear or radiation facility or due to activities thereof, besides other conditions and obligations imposed by the Law, this regulations and technical systems, standards, rules and requirements of safety, to which the licensee shall adhere, particularly:

1- Submit safety analysis reports for different facilities and operations conducted thereat in due course, in the due date before licensing the activity.

2- Keep the radiation doses to which the personnel and civilians are exposed, including doses resulting from radiation releases in the environment, to the dose limits set forth in the technical systems, standards, rule and requirements, as issued by the Commission.

3- Provide enough number of qualified staff to run the facility, through appropriate educational and training programs, as per a long-term plan that covers the duration of the facility and adopt the necessary measures to protect the staff health and ensure the safety of civilians, property as well as the environment.

4- Adopt necessary measures to ensure the safe and secured erection, operation and dismantle of the facility.

5- Keep the radioactive wastes resulting from the operation of the facility to the minimum attainable level, considering both the activity and size and guarantee that effective arrangements are in place for the secure and safe disposal of such wastes.

6- Adopt necessary measures to enable the Commission inspectors to conduct their work and examine relevant documents and records, as per the license conditions.

7- Adopt necessary measures after the end of the operational lifetime of the facility, to keep the facility in a safe and secure mode and radiation emissions within the limits as provided for in the systems and standards issued by the Commission.

8- Inform the Commission of his intention to introduce any changes to the nuclear facility, nuclear activities and radioactivity, devices, radioactive sources, radioactive substances or licensed places and facilities. No changes may take place, unless a prior license is obtained from the Commission.

Article - 6

The Commission shall prepare forms containing all the details of different license conditions, in addition to other forms that are required to be submitted, indicating the obligations of the licensee.

The license application shall be submitted to the Commission. The application shall be on file in the prescribed record at the Commission, establishing the date of application and type of activity to be exercised by the facility. The Commission shall give the applicant all the aforesaid forms, upon applying for the license, to satisfy them and submit all required documents in 3 copies. All conditions, obligations, standards and rules issued by the Commission in respect of the license, plus their modification, if any, including the forms and schedules, shall be made available at the website of the Commission. Furthermore, the Commission shall inform the licensee of the said, via a return-receipt requested mail, should there be any modifications after the application submission.

Article - 7

The Commission shall advice the license applicant of any unsatisfied data, documents or instruments, etc.., via a return-receipt requested mail. The applicant shall, accordingly, furnish the required data, documents or instruments, within 2 months from the date of his notification. In all cases, the period defined for the issuance of the license, through its different phases, indicated in each of the facility phases, shall be computed starting from the date of satisfying all required data and documents.

Article - 8

The licensee shall - before ending the activity of the facility - obtain a license from the Commission to end his service (with its two phases; ceasing the operations and dismantling), before ending the service, in pursuance of the following conditions and procedures:

a) The end of license application shall be handed over to the Commission, indicating the reasons of the end of service.

b) The applicant shall provide the plan of ending the service of the nuclear and radiation facility, which should cover the following:

   1- The general approach to be followed in the end of service process and reasons of disregarding such approach.

   2- Techniques of the contamination removal and dismantling to be applied, in a view to diminish- to the minimum- the generation of radioactive wastes and contamination over air suspended particles.

3- A plan for dealing with depleted fuel and radioactive wastes resulted from the nuclear facility.

4- A plan for the protection from radiations during the end of service process.

5- Mechanism of disposal of the radioactive wastes, according to the size and type of wastes.

6- A report covering the details of the process of handling, transporting and safe disposal of radioactive substances.

c) The applicant shall undertake to submit a report, upon the completion of end of service process, including the results of the radiation survey and indicating the degree of contamination removal.

Article - 9

The applicant shall undertake to dismantle the facility, as per the following conditions and requirements:

1- Prepare the dismantle and end of service plan for the facility.

2- Check, evaluate and examine the dismantle plan with the Commission, to guarantee observing the nuclear and radiation safety aspects, during the dismantling process.

3- The facility dismantle plan should cover the following:
   (a) Monitor the radiation levels at the place of the facility and nearby area, during dismantling process.
   (b) Start a complete and automated closure of the facility safety systems and circuits or the nuclear plant.
   (c) Safely manage the nuclear wastes and radioactive substances, during dismantling.
   (d) Dismantle the nuclear fuel units and remove contamination from the liquid, solid and gaseous substances.
   (e) Lay down a detailed program for the processes of dismantling and storage of the components of the facility.
   (f) Provide a report on the future uses of the site.

Article - 10

The Commission shall-during the procedures of licensing a nuclear or radiation facility - verify the commitment of the applicant to provide enough financial resources for the erection and operation of the nuclear and radiation facilities and make them available- when necessary - to cover the facility safe dismantling costs, including the disposal of the radioactive wastes resulting from the activity, before obtaining a commissioning and testing permit. The funds necessary to cover the costs of dismantling shall be set aside, without being disbursed on any other purposes during the lifetime of the facility, as per the technical systems issued by the Commission. The Commission shall regularly re-estimate the dismantling costs, based on the dismantle plan, to increase the allocated amount, if necessary.

The applicant shall provide necessary documents to establish the availability of enough financial resources for dismantling, as:

1- A letter of guarantee issued by an Egyptian bank, in the amount needed to cover the nuclear or radiation facility dismantling costs, as specified in technical systems, rules and regulations, issued by the Commission. The letter of guarantee shall be annually renewed, based on the request of the Commission.

2- A document signifying the deposit of a percentage of the costs of the nuclear or radiation facility- to the discretion of the Commission - in a private account in the name of the licensee at the Commission, to cover the costs related to the dismantle. Such allocated sum may not be disbursed - throughout the duration of the facility.

Article - 11

A special record shall be made at the Commission for the registration of the nuclear and radiation facility licenses. Registration shall depend on:

1- Obtaining the license required for the facility, with the type of the licensed activity being specified.

2- The license of the facility shall be effective.

Licenses issued after the date of forming such record shall be on file, upon their issuance. Effective licenses at the time of forming such record shall be on

file, within one month of advising the licensee of registration, via a return-receipt requested mail.

Chapter - 2
Licenses Of Nuclear Facilities

Article - 12

Licenses of nuclear facilities shall be subject to the following rules:

1) The licensee shall undertake to operate the nuclear facility through personnel holding operation licenses. The technical systems issued by the Commission shall specify the details of the jobs and titles that need to be licensed, according to the nature of the facility. The licensee shall further undertake to provide a sufficient number of qualified and well-trained personnel for all the activities related to the safe operation, throughout the operational lifetime of the nuclear facility.

2) The licensee shall bear full responsibility for the safe operation of the nuclear reactor.

3) The licensee shall prove the issuance of an insurance or allocation of a financial guarantee that would cover his obligations towards any nuclear damages that might occur, during the different license phases, starting from the site approval permit till the end of service license (with its two phases; end of operations and dismantling).

4) The licensee shall adhere to the systems, standards, rules and requirements issued by the Commission, in respect of the handling, transport and storage of the following:
   - Fresh nuclear fuel
   - Spent and used nuclear fuel
   - Radioactive wastes due to operation
   - Radioactive isotopes due to operation

5- The licensee shall adhere to all laws, regulations and procedures related to the nuclear safety, radiological protection and environmental protection.

6- The license shall include the conditions applicable, as per the technical systems and standards of the Commission.

7- Without prejudice to the provisions of Article (37) of the Law, the Commission may suspend, withdraw, revoke or amend the license, in pursuance of the regulating technical systems and standards, as issued by the Commission and as per the technical regulations related to the effectiveness policy.

8- Should there be any breach, the technical regulations related to the effectiveness policy shall apply, in accordance with the technical regulations of the Commission.

9- Data and information stated in the documents furnished by the permit or license applicant shall be deemed confidential, unless otherwise stipulated.

Article - 13

License of nuclear facilities - throughout its different phases - shall be granted based on the following procedures:

First - Site approval permit phase:

An application for approving the site shall be furnished, indicating the purpose of erecting the reactor or facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, enclosed with:

1- Data on the reactor or facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage.

2- Identification of the legal rights of the applicant for the site approval and the site, subject matter of the permit.

3- Identification of the site data and characteristics as well as the design bases and concepts, with complete data on the body which has conducted studies over the site.

4- A report on the project environmental assessment approved by the Environmental Affairs Agency, in pursuance of the technical laws, systems, standards, rules and requirements issued in this respect.

5- Copies of the ministerial approvals and concerned bodies approvals on the nuclear reactor or the facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, to be erected,

particularly Ministers of Defense, the Interior, Civil Aviation, Transportation and Local Development, competent governorate, General Intelligence and Supreme Council of Antiquities, each in its field of competence.

The Commission shall issue a site approval permit, within one year for the nuclear reactors, and within 3 months for the facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, of the date of applying for the permit, subject to satisfying all required data and documents.

Second - Erection permit phase:

Application for the erection permit shall be presented, with the following enclosures:

1- A copy of the site approval permit.

2- Time schedule of the erection and installation works.

3- Sufficient data on the companies and body that would oversee the erection, production and installation and their organizational structure.

4- Data on the person or bodies contracted therewith for the supply or construction works, including their nationality and prequalification in this field.

5- Quality management systems of bodies contracted therewith.

6- Radiological protection program.

7- Radioactive waste management systems.

8- Initial safety analysis report.

9- Preliminary nuclear and radiological emergency plan.

10- Preliminary plan for the physical protection and safety of nuclear facilities.

11- Basic system for the application of guarantees and control of nuclear materials.

12- An acknowledgement of adherence to the conditions stipulated by the Commission.

The Commission shall issue the permit within 18 months, in case of nuclear reactors and within 6 months, in case of the facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, from the date of applying for the permit, subject to satisfying all required data and documents.

One permit may be granted for both the site and erection, regarding the nuclear reactors, on condition that the applicant furnishes complete site data with the initial safety analysis report. The permit, in this case, shall be issued within 2 years of submitting the permit application, with all required data and documents for the site approval and erection permits being satisfied and on condition that no rejections- to the site under study - are made.

Third- Commissioning and testing permit phase

An application for commissioning and testing permit shall be handed over, with the following enclosures:

1- A copy of the nuclear reactor erection permit.

2- Any additions or modifications introduced to the design, based on the actual erection and installation.

3- Results of systems performance tests.

4- Commissioning and testing programs, explaining the time schedule of implementation.

5- Organizational structures of the teams of commissioning and testing as well as the operation and maintenance.

6- Data on the operators, their previous experiences and licenses granted thereto in addition to any penalties previously applied to them.

7- Any additions or modifications made to the preliminary plans of the physical protection, emergency, systems of applying guarantees and control over nuclear materials, radiological protection and radioactive waste management.

The Commission shall issue the commissioning and testing permit within 3 months, in case of research reactors and facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, and within 6 months, in case of power reactors, from the date of applying for the permit, subject to satisfying all required data and documents.

Fourth- Fuel loading and criticality permit phase:

An application for fuel loading and criticality attainment permit shall be furnished, with the following enclosures:

1- Reports on the commissioning and testing results.

2- A copy of the nuclear reactor erection permit.

3- Any additions or modifications introduced to the design, based on the actual erection and installment.

4- Results of the systems performance tests.

5- Fuel loading and criticality attainment programs, indicating the time schedule of implementation.

6- Organizational structures of the groups of Fuel loading and criticality attainment.

7- Data on the operators, their prior experiences and licenses granted thereto in addition to any penalties previously applied to them.

8- Any additions or modifications made to the preliminary plans of physical protection, emergency, systems of applying guarantees and control over nuclear materials, radiological protection and radioactive waste management.

The Commission shall issue the fuel loading and criticality permit within 1 month, in case of research reactors and within 2 months, in case of power reactors, from the date of applying for the permit, subject to satisfying all required data and documents.

Fifth - Operation license phase:

An application for the operation license shall be presented, with the following enclosures:

1- A copy of both the commissioning and testing permit and fuel loading and criticality permit.

2- Results of the commissioning and testing.

3- The final nuclear safety analysis report.

4- The nuclear and radiological emergency plan.

5- The nuclear facilities physical protection and safety plan.

6- The system of applying guarantees and control over nuclear materials.

7- Description of the experiments to be conducted at the core of the reactor or reflector or on the channels in case of research reactors.

8- Documents proving: quality management - operation- maintenance.

The Commission shall issue the operation license within 3 months, in case of research reactors and facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage and within 6 months, in case of power reactors, from the date of applying for the permit, subject to satisfying all required data and documents.

Sixth- End of service license phase (with its two phases; end of operations and dismantling):

The application for the end of service license shall be presented, inclusive of the reason of ending the service, enclosed with:

1) A report on the safe dismantle and removal of radioactive contamination, as per the applicable technical systems, standards, rules and requirements.

2) The following programs and plans applied during the end of service:
   a. Radiological protection program.
   b. Radioactive waste management plan.
   c. The nuclear and radiological emergency plan.
   d. The physical protection plan.

e. The system of applying the guarantees and control over nuclear materials.
f. Quality management systems.

3) A report on the site future uses.

The Commission shall issue the end of service license during 6 months, in case of nuclear research reactors, within one year in case of power reactors and within 3 months, in case of the facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, from the date of applying, with all the necessary data and documents being met.

Article - 14

The license shall be effective for 40 years, for the operation of the nuclear reactors as well as critical and sub-critical complexes, and for 10 years, for the facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage. A full periodical safety review shall be conducted every 10 years for the nuclear reactors as well as critical and sub-critical complexes, and every 5 years for the facilities of nuclear fuel fabrication, transformation, enrichment and production as well as spent fuel storage, in addition to periodical inspections, in accordance with the Commission technical systems, standards, rules and requirements.

For the renewal of the operation license, the renewal application should be enclosed with:

(a) The final nuclear safety analysis report updated before the end of license by a period determined by the Commission in the granted license, as per its technical systems and standards.

(b) A report on the project environmental assessment approved by the Environmental Affairs Agency.

The Commission may change the license conditions, as per the international technical and technological updated considerations related to the nuclear and radiation safety, in a view to benefit from such considerations in updating the granted license in the future.

Article - 15

The application for renewing the operation license of the facilities provided for in Article (14) of this regulations shall be presented to the head of the Commission, annexed with 3 copies of the required documents and a receipt signifying the payment of the stipulated renewal fees.

Chapter - 3
Licenses Of Gamma Irradiation Facilities And Electron And Ion Accelerators

Article - 16

No gamma irradiation facilities and electron and ion accelerators may be erected, acquired, owned or operated, except those accelerators used in the medical field subject to the regulation and control of the Ministry of Health, nor any alterations in the radioactive source, radioactive substance or its work nature may be conducted, unless the necessary license is obtained from the Commission, without prejudice to the necessary licenses and permits stated in the Law and current regulations and decrees implementing same.

Article - 17

Licensing gamma irradiation facilities and electron and ion accelerators shall be subject to the following rules:

1- The applicant shall provide a full radiological emergency plan, to face any possible accidents at the gamma irradiation facilities and electron and ion accelerators.

2- The operator shall incur the main responsibility for the safe operation of gamma irradiation facilities and electron and ion accelerators.

3- Handling of radioactive sources and radioactive substances used at gamma irradiation facilities and electron and ion accelerators shall be subject to the regulatory technical systems and standards of the Commission, in pursuance of the international standards in this regard.

4- The applicant shall, throughout the license period- undertake to abide by all the technical regulations, rules, instructions, standards and principles related to radiation safety, issued by the Commission.

5- The applicant shall furnish a proof of maintaining an insurance against the damages of radiation hazardous, in accordance with Article (27) - item (6) of the Law, the present regulations and systems issued by the Commission.

6- The Commission shall have the right to revoke, withdraw, suspend or modify any licenses or permits issued thereby, as stipulated in Article (37) of the Law.

7- The Commission may add, modify or cancel any of the conditions necessary for obtaining the license, according to the updates of the rules of nuclear security and safety, radiological protection and other relevant technical considerations.

8- The safety analysis report submitted to the Commission, during operation license phase, shall be deemed a license reference and part and parcel thereof.

9- The applicant shall present a plan indicating his abidance by having a water purification system for gamma irradiation facility basin, on condition that it is in conformity with standard values specified by the Commission.

10- The end of service phase shall be subject to all technical systems, standards, rules and requirements of the Commission on the safe handling, transport, storage and disposal of radioactive wastes, as well as the radiation level within the building, in case such building is not removed, or at the place, in case of its removal.

Article - 18

Except for the X-rays devices used in the medical field, the license applicant shall obtain an import approval before shipping radioactive sources, radioactive substances and electron and ion accelerators from the country of origin, as per the rules and systems of the Commission.

The import approval application shall be enclosed with:

First- Data on training, operation procedures and safety analysis, including:

1- Description of the operators training, including the experiences and training of the instructors.
2- A blueprint of the written operation and emergency procedures which explains the radiation safety aspects of such operations.

3- A description of the radioactive release tests.
4- The safety analysis report which covers any updates or modifications, based on fabrication, erection, installation and tests.

Second- Data on the operating body and operators, including:

1- Name of the operating body.
2- The organizational structure of the management of erection and operation, covering the tasks and responsibilities.
3- Qualifications, experiences and authorities of the facility operation manager.
4- Qualifications and experiences of radiological protection officers and licenses granted thereto.
5- Qualifications and experiences of operators and maintenance officers.

Third- Data on radioactive sources and radioactive substances, including at least:

1- Name of the element, mass number, maximum value at the start of operation, half-life, chemical or physical form and number of units forming the radioactive source or radioactive substance in addition to the radiation of each, name of the producer, model number and a copy of the country of origin certificate and quality tests.

2- Shipping method of the radioactive source or radioactive substance to Egypt, procedures of transportation to the site and loading to the facility and necessary precautionary measures.

3- Replacement and renewal program of the radioactive source and radioactive substance units.

4- An illustration of the methods of handling or disposal of some or all units of radioactive source and radioactive substance, after a specific period or as a result of the deterioration or damage of the properties of packaging material.

Fourth- Data on the radiation security and safety which should include at least:

1- Places of distributing radiation monitors, their numbers, types and sensitivity.

2- Places of shields against radiation, their dimensions, fabrication materials and calculation methods or their references.

3- Radiation monitors calibration program and method.

4- Distribution of personal dose measurement.

5- Measurements of radiation level at different places, inside and outside the irradiation room and in control room, during operation when radioactive source or radioactive substance is in the storage area and during the movement of the source or substance from the warehouse to irradiation place and vice-versa.

6- Methods of the regularly measuring the water chemical and physical parameters and manner of keeping them within the limits proposed by the importing company.

7- A description of test methods of radioactive releases from radioactive source and radioactive substance units.

8- A description of the facility entrance control systems, including an illustration of the location of all entrances and methods of securing gates closure and opening.

9- Physical protection program against inside and outside threats.

10- Analysis of possible accidents in the safety analysis report.

11- Quality assurance program.

Article - 19

License of gamma irradiation facilities and electron and ion accelerators shall, throughout its different phases- be according to the following procedures:

First - Site approval and erection permit phase:

The site approval and erection permit application stating the erection purpose shall be submitted, attached with the following:

1- A report on the site data and characteristics, with complete data on the bodies conducting relevant studies in this respect.

2- Design bases and the final blueprints and engineering drawings prepared by the permit applicant.

3- A report on the project environmental assessment, approved by the Environmental affairs Agency.

4- Copies of the ministries and competent bodies approvals on the facility to be established at the proposed site, particularly Ministries of Defense, Interior, Civil Aviation, Transportation and Local Development plus the competent governorate, General Intelligence and Supreme Council of Antiquities, each in its field of competence.

The applicant should submit an application to the Commission for the facility erection and site approval before sending the purchase order to the body producing the radioactive source or accelerator.

The Commission shall issue the site approval and erection permit within 3 months from the date of the application, with all required data and documents being met.

Second- Operation license phase:

<u>The operation license application shall be submitted attached with:</u>

1- Results of operation start-up tests.

2- The final nuclear safety analysis report.

3- The final radiological emergency plan.

4- The radiation facility physical protection plan.

5- A final report on quality assurance programs

6- A certificate establishing the enough training of the operators, as per the regulatory systems of the Commission and licenses granted thereto, and describing the programs, systems and structures of operations, operators, maintenance works plus operators specialties, their training programs and licenses.

7- The final plan of operation procedures.

8- The final plan of the facility maintenance procedures and programs.

9- Certificates issued by civil defense, electricity, insurance and manpower bodies which indicate the conduct of inspection, each in its field of competence.

The commission shall issue the operation license, during 3 months of the date of turning in the application satisfying all required data and documents.

Third - End of service license phase (with its two phases; end of operations and dismantling):

Service should end after the end of the lifetime of the irradiation facility or electron or ion accelerator, unless the license is renewed, taking into consideration the safety of civilians and end of service personnel.

The end of service license application shall be submitted before starting the process, with the end of service reasons being mentioned, attached to the following:

1- The dismantle plan including dismantling procedures and time schedule.

2- A report including processes of handling, transport, contamination removal and safe disposal of the equipment and radioactive substances, with the places of dumping equipment and substances being determined, considering the radiation levels.

3- The applicant shall submit a report on the site future uses.

The applicant shall turn in a report, upon the completion of end of service, including the results of the radiation survey, to explain the degree of removal of contamination.

The Commission shall issue the end of service license, during (3) months from the date of submitting the application, with all required data and documents being satisfied.

Article - 20

The license of operating gamma irradiation facility or electron or ion accelerator shall be effective for 10 years, conditional on conducting a periodical safety review, every 3 years, as well as periodical inspections, as per the Commission technical systems, standards, rules and requirements.

For the renewal of the license, the following shall be enclosed with the renewal application:

1- The final safety analysis report updated before the end of the license by a period to be determined by the Commission in the license granted, as per the Commission technical systems and standards.
2- An updated radiological emergency plan.
3- An updated physical protection plan for the radiation facility.
4- A final report on the quality assurance programs.
5- Effectiveness of the operators' licenses.

The Commission may change the license conditions, as per the international technical and technological updated considerations related to the nuclear and radiation safety, in a view to benefit from such considerations in updating the granted license in the future.

Article - 21

Application for the renewal of the license of operating the facilities and accelerators provided for in Article (20) of this regulations shall be handed over to the head of the Commission, attached with 3 copies of the required documents and an invoice signifying the payment of the stipulated renewal fees.

Chapter - 4
Radioactive Sources And Substances Licenses

Article - 23

No radioactive sources and substances may be imported, used or operated, for any purpose, before obtaining a place license, conditional on satisfying all protection requirements. Use of radioactive sources and substances - for medical purposes - shall only be licensed at hospitals, their departments or the like where radioactive sources and substances can be used, in accordance with the equivalency certificates issued by the Ministry of Health in this respect.

Article - 23

License of using or renewing the use of radioactive sources or substances or industrial radiography at a certain place shall be subject to the following terms and conditions:

1- The licensee may not, in any way, dispose of the radioactive sources and substances owned or duly acquired thereby, before, during and after their

use to any person or body, even if licensed to handle and use radioactive sources and substances, unless a prior approval of the Commission is obtained.

2- All ways of handling and use of radioactive substances shall be subject to the rules set forth in the basic safety standards and the Commission technical systems, standards, rules and requirements.

3- The licensee shall bear the responsibility of protecting the personnel, facilities and environment from the radioactive contamination or release.

4- The Commission shall conduct regular follow-up to ensure the abidance by the radioactive sources and substances safety requirements, radiological protection, environmental protection from the radioactive contamination or release and maintenance of place and personal licenses granted. Bodies licensed to work in radioactive sources and substances shall facilitate the mission of the Commission inspectors regarding such follow-up.

5- The licensee shall make available and keep the records and equipment in reachable places for examination at any time by the Commission inspectors.

6- Those licensed to handle the radioactive sources and substances shall abide by the required precautionary measures specified by the Commission in its technical systems.

7- Licensee may not parcel nor transport radioactive substances from the places licensed to handle radioactive substances therein to other places, except after the approval of the Commission.

8- Radioactive substances shall be transported, as per the Commission safe transportation rules and regulations of such substances, under the supervision of the protection officer or expert.

9- The licensee shall store the handled, not used or dumped radioactive substances and shall keep and handle the radioactive wastes, till their delivery to the radioactive waste management facility, at storage areas in conformity with the specifications designated as per the Law, this regulations and as per the Commission technical systems, standards, rules and requirements.

10- Protection officer at the work place shall be informed, if unusual operating conditions occurred and lead or might lead to the non-abidance by the safe operation requirements, to control the situation and restore things, within an hour. In case of failure to so do, the Commission shall be informed.

11- The licensee shall regularly conduct radiation survey and inspection of radioactive sources and substances, to ensure their non-loss and the absence of radioactive contamination or release, as per the Commission technical systems and standards.

12- The licensee shall seek the assistance of a protection officer or expert to regulate work and ensure protection from radioactive substance hazards.

13- The licensee shall apply for the renewal of the license before its expiry by at least 60 days, otherwise the renewal application will be deemed as a new license application.

Article - 24

License for using radioactive sources or substances in a certain place shall be issued for one renewable year, after meeting the conditions set forth in this regulations and the Commission technical systems, standards, rules and requirements and after the payment of the stipulated fees.

Article - 25

License for using radioactive sources or substances in a certain place or renewal of such license for bodies working in radioactive sources or substances or industrial radiography shall be obtained, as per the following procedures:

The application for the license or its renewal shall be submitted to the head of the Commission, attached with the following documents:

1- Form of the license application or renewal application.

2- A sketch illustrating the location of the place in which radioactive sources or substances would be used compared to other parts of the building and other buildings in the location plus another sketch showing the contents of the laboratory from within.

3- The laboratory safety analysis report which indicates the details that were missing in the license application form.

4- Radiological emergency plan devised by the radiological protection officer, considering the industrial safety elements at the location.

5- A copy of the description and operation manuals of the devices used in measuring the personal radiological doses and measuring rate of radiological dose at different workplaces.

6- A copy of the contract concluded with the protection officer or expert to supervise the implementation of protection procedures specified by the Commission, attached with a copy of the license of the officer or the expert.

7- A receipt indicating payment of fees stipulated for the issuance of the license.

Article - 26

Radioactive sources and substances shall be stored pursuant to the following:

1- Storage place shall be well sealed and prohibited to unlicensed persons, as per the Commission technical systems, standards, rules and requirements.

2- Radioactive sources and substances may not be stored at one place with inflammable materials or explosive materials.

3- Devices remotely handling radioactive sources and substances from inside the storage place shall be provided.

Article - 27

All land, sea and air ports as well as those licensed to import radioactive sources or substances shall promptly inform the Commission upon the arrival of the radioactive sources and substances to the country, furnishing the Commission with comprehensive particulars on such radioactive sources and substances, whatever their kind. Such notification shall be followed also upon the re-export of radioactive sources and substances, as per the Commission technical systems and rules.

Article - 28

The Commission shall maintain registers containing the following:

1- A register for recording the radioactive sources and substances - of whatever kind - and their users, with the following particulars being in file:
   - Particulars of the licensee who is allowed to acquire such sources and substances.
   - Number and type of the radioactive sources and substances.
   - Name of the protection expert or officer supervising the body requiring the radioactive source or substance.
   - Code number of the radioactive source or substance and the radiation potential during production, the source or substance half-life and production date.
   - Purpose of use.

2- A register to record the results of inspection visits made by the Commission. Such inspections shall include all work sites of bodies using radioactive sources and substances, ensure that devices containing such sources and substances are in good working conditions and that protection officers or experts at such bodies are conducting their tasks as per the laws and rules regulating the work in radiation field. Inspection works shall further include examining the register prepared by the protection expert or officer.

3- A special register for the transportation operations of the radioactive sources and substances.

4- A special register for the radiation accidents indicating the details of the accidents and procedures adopted in this regard.

Chapter - 5
Licenses of Mining and Treatment Facilities

Article - 29

Mining and treatment facilities shall be subject to the following rules:

1- All methods of handling and use of radioactive substances shall be subject to the rules stated in the basic safety standards, the present law and

regulations in addition to the Commission technical systems, standards, rules and requirements.

2- Licensee shall be responsible for the protection of personnel, facilities and environment from radioactive release or contamination.

3- The Commission shall conduct regular checks to ensure abidance by the requirements of radiation safety, radiological protection and environmental protection from radioactive release and contamination.

4- The licensee shall allow the Commission inspectors to examine registers and devices and shall keep the said in an accessible place, at all times.

5- The licensee shall submit his renewal application before the previous license expiry date, by at least 60 days; otherwise the renewal application will be deemed a new license application.

6- No radioactive substances may be packaged or transported from places licensed to handle radioactive substances to another places by the licensee, except after the approval of the Commission.

7- Radioactive substances shall be transported as per the rules and regulations of safe transportation, as approved by the Commission, under the supervision of protection officer or expert.

8- The licensee shall undertake to store handled and unused or dumped radioactive substances as well as keeping and handling radioactive wastes till their re-export or delivery to the radioactive waste management facility, in storage areas matching the specifications defined as per the Law, the present regulations and the Commission technical systems, standards, rules and requirements.

9- The licensee shall seek the assistance of a protection expert or officer to regulate work and ensure protection from radioactive substances.

Article - 30

A new license or renewed license to mining and treatment facilities shall be obtained according to the following procedures:

The license or renewal application shall be submitted to the head of the Commission on the prescribed form, annexed to the following:

1- A sketch indicating the place that needs to be licensed and another sketch for the contents of the place from within.

2- A safety analysis report explaining the details that were missing in the license form or renewal form.

3- A radiological emergency plan to be handed over by the radiological protection officer that considers the industrial safety elements at the location.

4- A copy of the description and operation manuals of the devices used in measuring the personal radiological dose and measuring radiological dose rate at different workplaces.

5- A copy of the contract concluded with the protection officer or expert to oversee the implementation of protection procedures specified by the Commission, attached with a copy of the license of the officer or the expert.

The license shall be issued within six months of the date of submitting the license application, satisfying all required data and documents.

The license shall be issued for one renewable year, after meeting the requirements stated in this regulations and technical systems, standards, rules and requirements and payment of stipulated fees.

Chapter - 6
Licenses of Nuclear Materials Acquisition, Handling Or Production

Article - 31

Licenses of nuclear materials acquisition, handling or production shall be subject to the following rules and conditions:

1- The licensee shall promptly furnish the Commission head with the data and information of handling nuclear materials in Egypt or any other place under its control or supervision as well as other data and information of importation and exportation of such materials, to satisfy the requirements of International Atomic Energy Agency (IAEA) stated in the guarantees agreement including the facility design data.

2- The licensee shall early notify the Commission head of the facility design information and of any other changes to such information before occurrence by 6 months.

3- The Commission shall- in coordination with the nuclear facilities or sites outside the facilities- prepare a document (facilities attachments) that details the method of applying the procedures of Egypt Nuclear Material Control and Accountability system within each facility or site. Such document shall be approved by the Commission board in its final form.

4- To end the regulatory control of the Commission over nuclear materials, the approval of Egypt Nuclear Material Control and Accountability system must be obtained.

Article - 32

Nuclear material acquisition, handling or production license shall be issued, in pursuance of the following procedures:

An application certified by the applying body shall be handed over to the head Commission, indicating the facility name, general data on the facility or the sites outside the facility, name, address and capacity of the person in charge, location of the facility or sites outside the facility, its approximate area and facility full address, phone, fax and e-mail. The license application shall be attached with:

1- A report covering a general description of the activity of the facility or sites outside, type and quantity of the nuclear materials to be acquired, handled or produced and purpose of the activity.

2- A report describing the measurement system or systems to determine the types and quantities of nuclear materials under acquisition, handling or production and any changes thereto.

3- A document including the design data and an acknowledgement of their correctness.

4- A report describing the nuclear material accountability system, covering samples of registers and reports used.

5- An acknowledgement of the presence of an officer responsible for nuclear material control and accountability.

6- An acknowledgement of the acceptance of inspections by the Commission and Agency, till the satisfaction of the facility attachment as per the requirements specified by the Commission technical systems, standards, rules and requirements.

7- An acknowledgement of the correctness of the data stated in the application.

The applicant shall satisfy the facility attachment as required by the Commission and pay the stipulated fees.

It shall be decided on the license application within 30 days of the date of its submission, with all required data and documents being satisfied.

Article - 33

Licenses for nuclear material acquisition, handling or production shall be issued for one renewable year. The Commission may review the license during its effectiveness, if necessary.

Part - 3

Personal Licenses for Exercising Nuclear Activities And Radioactivity

Chapter - 1
General Rules And Standards

Article - 34

No person may exercise any nuclear activity or radioactivity, without obtaining the Commission license, as per the provisions of the Law, the current regulations and decrees implementing them. No personal license for the exercise of any activity that causes exposure to ionized radiations, except after obtaining the relevant qualification and training, as per training programs approved by the Commission.

In general, standards issued by the Commission in its technical systems and rules shall be met in the license applicant. Furthermore, the applicant shall enjoy health fitness necessary to conduct his work, as per a medical examination of which technical details would be laid down by the Commission board, in cooperation with Ministry of Health.

The personal license for the exercise of nuclear activities and radioactivity shall be subject to the following general requirements:

1) Before the exercise of any nuclear activity or radioactivity or acquisition of radioactive sources or substances, an application shall be handed over to the Commission to obtain a license, as per the Commission technical systems, standards and guidelines.

2) Those licensed to exercise any nuclear activity or radioactivity or acquire radioactive sources or substances shall obtain licenses from the Commission, for the personnel working therewith in such activities and exercises as set forth in this Part as well as the personnel in charge of main tasks regarding radiological protection and safety and security of radioactive sources and substances, as per the Commission technical systems, standards and rules.

Chapter - 2
Conditions Of Licenses Of Radioactive Source Users And Protection Personnel

(User - Protection Expert - Protection Officer Radiologic Technician - Radiologic Technician Assistant)

Article - 35

Without prejudice to the provisions of Article (2) of the Law's enactment clauses, no license to use radioactive sources or isotopes in diagnosis and treatment purposes may be issued, except for the doctors who provide the Commission with a statement signifying their adequate training on the use of radioactive sources and substances and protection from their hazards from any accredited body conducting such programs. The Commission shall approve the training programs and their contents in this respect. The doctor may not be authorized to use different kinds of radioactive sources and substances for medical purposes, except after satisfying the following two conditions:

1- Hold a specialized diploma in medical radiology from an Egyptian university or its equivalent.

2- Be registered at the list of doctors specialized in medical radiology, at the Ministry of Health.

Persons using radioactive sources or substances shall have personal licenses to use the said from the Commission, as per the Commission technical systems and standards regulating same.

Article 36

Any person licensed to use radioactive sources and substances shall hold a bachelor degree from a specialized scientific college and shall hold a diploma in radiation physics or a specialized certificate in a relevant field, from an Egyptian college or its equivalent or a training program in using radioactive sources and substances. Such person shall furnish a proof of his obtainment of enough training on the programs of using radioactive sources and substances and protection from their hazards from anybody conducting such programs. The Commission shall approve such training programs and their contents in this regard.

Article - 37

Any person licensed to work as a "protection expert'' from the hazards of exposure to ionized radiations shall meet any of the following:

1- Exercised the job of radiological protection officer for a period not less than 10 years, with researches published in radiological protection field.

2- Holds PhD in radiation physics or nuclear engineering, with experience in the radiological protection field of at least 3 years. It would be an asset if he has published researches in radiological protection.

3- Works in radiological protection field, holds a relevant bachelor degree and has experience in radiological protection not less than 15 years at a specialized authority, with published researches in this field.

The license application shall be attached with all documents signifying the satisfaction of any of the above conditions.

The protection expert shall be affiliated to a governmental body or certified scientific consultancy office.

A register shall be maintained at the Commission for recording the protection experts, subject to obtaining the said license. Persons registered at the Ministry of Health as protection experts shall apply to the Commission to obtain protection expert licenses and be recorded in the Commission protection experts list.

No qualified protection expert may supervise more than one body licensed to work in radioactive sources or substances, unless he obtains the approval of the Commission, based on its database regarding the number of experts.

Article - 38

Any person licensed to work as a "protection officer" from the hazards of exposure to ionized radiations shall:

1- Hold a bachelor degree in science (physics or biophysics specialty or their equivalent) or nuclear engineering from an Egyptian college or its equivalent or hold a university degree in addition to a certificate specialized in fields related to the aforesaid specialties from an Egyptian college or its equivalent.

2- Provide a proof of obtaining an adequate training on the programs of using radioactive sources and substances and protection from the hazards of exposure to ionized radiations from an accredited body conducting such programs. The Commission shall approve the training programs and their contents available in this regard.

A special register shall be maintained at the Commission for the registration of the protection officers, subject to obtaining the said license. Health physicians registered at the Ministry of Health shall apply at the Commission to obtain protection officer licenses and be registered in the Commission protection officers list.

Article - 39

Subject to the provisions of Article (2) of the Law's enactment clauses, persons licensed to work in radioactive sources and substances as "radiologic technicians" shall:

1- Hold the Health Institute Diploma - radiologic technicians section or Industrial Technical Institute Diploma or its equivalent.

2- Provide a proof to the Commission on obtaining an adequate training on using radioactive sources and substances from anybody conducting the said. The programs and their contents shall be approved by the Commission.

A special register shall be maintained at the Commission for recording the radiologic technicians, subject to obtaining the said license. Radiologic technicians registered at the Ministry of Health shall apply to the Commission to be recorded in the said register, if they hold a specialized qualification from health technical institutes.

Article - 40

Subject to the provisions of Article (2) of the Law's enactment clauses, any person to be licensed to work in radioactive sources and substances as a "radiologic technician assistant" shall meet the following:

1- Hold at least a vocational certificate.

2- Attended a training course in protection from the hazards of ionized radiations from an accredited body conducting such courses. Such courses and their contents shall be approved by the Commission.

A special register shall be maintained at the Commission for recording the radiologic technician assistants, subject to obtaining the said license. Those registered at the Ministry of Health shall apply at the Commission to be recorded in the said register.

Chapter - 3
Licenses Of The Operators Of Research Reactors, Power Reactors, Nuclear Fuel Cycle Facilities, Gamma Irradiation Facilities And Electron And Ion Accelerators

Article - 41

The Commission license shall be obtained to occupy the following positions in research reactors: operation engineer- operation shift head- operation head- reactor manager- radiological protection manager- maintenance manager

The Commission license shall be obtained to occupy the following positions in power reactors:

1- Set of the operation shift jobs including: shift head - shift vice-head - site shift head at the plant- unit (reactor) shift head at the plant- shift technical supervisor- safety engineer.

2- Set of the operators' jobs including: control room operator- primary circuit operator- head of control room operation engineers- turbine operator- secondary circuit operator- head of turbine control room operation.

3- Jobs: reactor manager- radiological protection manager- maintenance manager.

The Commission license shall be obtained to occupy the following positions at the nuclear fuel cycle facilities: facility manager- operation head- radiological protection head- maintenance head.

The Commission license shall be obtained to occupy the following positions at the gamma irradiation facilities and electron and ion accelerators:

facility manager - operation head - radiological protection head - maintenance head - operator - operation shift head - radiologic technician.

Article - 42

The general rules of granting licenses to occupy jobs at the research reactors, power reactors and nuclear fuel cycle facilities include the following:

1- The operating body shall apply for licenses for the persons nominated to occupy operation jobs as well as facility manager, radiological protection manager and maintenance manager jobs, after paying the stipulated fees. The application shall include a proof of applying for such jobs by those persons, attached with documents necessary as per the technical systems issued by the Commission. Personnel licenses issued shall be confined to a particular facility, with no effect at any other facility.

2- The license shall be effective for 3 years, insofar as no incident requiring its suspension, termination or revocation takes place, in pursuance of the Commission technical systems.

3- The operating body shall undertake to conduct the medical and psychological examination for the applicant before obtaining the license by no more than 2 months. The operating body shall further undertake to conduct periodical examinations for the licensed personnel, at least once a year at the body or bodies approved by the Commission, informing the latter with the results and their conformity with the health requirements stipulated in the Commission technical systems.

Article - 43

The license applicant shall furnish the following data and documents:

1- Complete data on the nominee from the operating body to obtain the license, including: full name - date and place of birth- qualifications - current job- previous licenses.

2- The job that needs a license for the nominee to occupy.

3- Experience certificates related to the job requiring a license, in general, and certificates related to the nuclear activities and radioactivity, in specific.

4- Attended course and workshops related to the job requiring a license for the nominee to occupy.

5- Full details on the received training programs and practical qualifications relevant to the job requiring a license.

6- An authenticated certificate proving the health fitness required, as per the Commission technical systems.

7- An authenticated certificate which proves the attendance and successful pass of a radiological protection course.

8- Payment of stipulated fees.

Article - 44

For the obtainment of licenses to the research and power reactor operators, the qualifications and experiences assigned to each job as follows shall be met:

(a) Operation engineer and the set of operators' jobs:

1- Hold a bachelor degree in engineering in a relevant specialty, preferably nuclear engineering.
2- Previously trained on the operation of the same reactor for at least 6 months.
3- Pass the written, oral and practical tests of the Commission, as per its technical systems.

(b) Operation shift head and the set of operation shift jobs:

The same conditions and qualifications set forth in item (a) of this article shall apply on the operation shift head and the set of operation shift jobs, in addition to the following:

1- Be previously licensed to work as an operation engineer in the same reactor, with effective license at the time of applying for the job of operation shift head and worked in the same reactor for at least 3 years or having similar experience for at least 3 years in a similar reactor.

2- Experience required entails that the number of previous operation hours made by the applicant be not less than 15% of the actual operation time and that the number of starting the reactor operation be not less than 15% of the actual number of starting the reactor

operation. The experience certificate shall be issued by the operation head and approved by the reactor manager and operating body head.

3- Pass the written, oral and practical tests of the Commission, as per its technical systems.

(c) Operation head shall:

1- Have an effective license in the same reactor as an operation shift head, when applying for the license of operation head job and worked as a shift head for at least 3 years in the same reactor.

2- Pass the written, oral and practical tests of the Commission, as per its technical systems.

Article - 45

For the obtainment of licenses to the following research and power reactor operators, the conditions, qualifications and experiences assigned to each job shall be met:

(a) Reactor manager:

To appoint a reactor manager, he must be previously licensed to occupy any of the following operation jobs (operation shift head or operator), and his license must be in effect, when applying for the required license, with a work experience in operating the same reactor not less than 3 years.

(b) Radiological protection manager shall:

1- Be registered at the Commission radiological protection officers or experts registers.

2- Have at least 3-year nuclear experience in radiological protection, one of which at least is spent in the radiological protection works in the same reactor he is nominated to work thereat or in a similar one.

(c) Maintenance manager shall:

1- Hold a Bachelor of Science in Engineering or a relevant specialty, preferably mechanical or power engineering.

2- Have at least 3-year nuclear experience in reactors maintenance, one year of which at least is spent in the same reactor he is nominated to work thereat or in a similar one.

Article - 46

The following conditions shall replace the period prerequisites nominees are supposed to have spent in order to occupy the following jobs- operation engineer, the set of operators' jobs, operation shift head, the set of operation shift jobs or operation head- in the same reactor, as stipulated in Article (44) of the present regulations, in respect of nominees to such jobs in new reactors (research or power) or upon the non-satisfaction of such period prerequisites:

1- Attendance of the nominee to the phases of installations, fuel loading, commissioning tests and first phases of operations.

2- The nominee shall successfully spend an enough training period in a simulator to the same or similar reactor, as follows:
   (a) Research reactors: (3 months for the operation engineer- 4 months for the shift head- 6 months for the operation head).
   (b) Power reactors: (5 months for the operation engineer- 7 months for the shift head- 9 months for the operation head).

3- The nominee shall successfully spend an enough training on operation, under the supervision of the implementing body, as follows:
   (a) Research reactors: (3 months for the operation engineer- 4 months for the shift head- 6 months for the operation head).
   (b) Power reactors: (5 months for the operation engineer- 7 months for the shift head - 9 months for the operation head).

4- Nominee shall participate in preparing the safety analysis reports.

5- Nominee must pass the written and practical tests of the Commission.

The nominee may be exempt from the two conditions set forth in items (1) and (2) of this article, if the nominee has worked in a similar reactor for at least (3) years.

The following conditions shall replace the period prerequisite the nominee is supposed to have spent in order to occupy the reactor manager job in the same reactor, as stipulated in Article (45) of the present regulations, in respect of the nominee to such job in new reactors (research or power) or upon the non-satisfaction of such period prerequisite:

The nominee shall:

1- Be among those who were engaged in the phases of installation and construction, fuel loading, commissioning tests and first phases of operation and capacity increase.
2- Have participated in preparing safety analysis reports.
3- Have at least one-year nuclear experience, with a training period in a simulator to the same or similar reactor for 6 months and 9 months for research and power reactors respectively.
4- Have worked in operation of a similar reactor for 6 months and 9 months for research and power reactors respectively.

Article - 47

For operators of nuclear fuel cycle facilities to be licensed, the following qualifications and experiences attributed to each job shall be met as follows:

(a) Operation head shall:

1- Hold a Bachelor of Science in nuclear or chemical engineering or metallurgical engineering, or a Bachelor of Science in chemistry.
2- Be trained on operating a nuclear fuel cycle facility for at least 2 years.
3- Pass the written, oral and practical tests of the Commission, as per the Commission technical systems and standards.

(b) Facility manager shall:

1- Hold a Bachelor of Science in engineering in a relevant specialty, preferably nuclear or chemical engineering or metallurgical engineering or a Bachelor of Science in chemistry.
2- Have previous experience in efficiently and appropriately running and operating a nuclear fuel cycle facility for no less than 3 successive years.

(c) Maintenance manager shall:

1- Hold a Bachelor of Science in Engineering in a relevant specialty, preferably mechanical, power or chemical engineering.
2- Have nuclear experience of at least 2 years in the maintenance of nuclear fuel cycle facilities, at least one year of which is in the same facility at which he is nominated to work or in a similar one.

(d) Radiological protection manager shall:

1- Be registered in the Commission radiological protection experts or officers registers.

2- Have at least 2 year nuclear experience in radiological protection, at least one year of which shall be in radiological protection works in the same facility at which he is nominated to work or in a similar one.

Article - 48

For operators of gamma irradiation facilities and electron and ion accelerators to be licensed, the following qualifications and experiences attributed to each job respectively shall be met:

(a) Operation head- facility manager shall:

1- Hold a Bachelor of Science in Engineering in a relevant specialty or a Bachelor of Science in Physics.
2- Have at least 2-year experience in operating a gamma irradiation facility or electron and ion accelerator
3- Pass the written, oral and practical test of the Commission, as per the Commission technical systems and standards.

(b) Radiological protection manager shall:

1- Be registered in the Commission radiological protection experts or officers registers.
2- Have at least 2- year experience in a gamma irradiation facility or electron and ion accelerator.

(c) Maintenance manager shall:

1- Hold a Bachelor of Science in Engineering in a relevant specialty, preferably mechanical or power engineering.
2- Have at least 2-year experience in the maintenance of gamma irradiation facilities or electron and ion accelerators, at least one year of which shall be in the same facility at which he is nominated to work or in a similar one.

(d) Operator- operation shift head shall:

1- Be registered in the Commission registers of radioactive source and substance users.
2- Have at least 2-year experience in working at a gamma irradiation facility or electron and ion accelerator.

(e) **Radiologic technician shall:** be registered at the radiologic technician registers of the Commission.

The license shall remain effective, insofar as no incident requiring its suspension, termination or revocation takes place, in pursuance of the Commission technical systems.

Article - 49

The operating body shall apply for license renewal to its operators at the research or power reactors or nuclear fuel cycle facilities, to the Commission, before the expiry of the license by at least 45 days, with the following enclosures:

1- Full particulars of the renewal applicant.

2- Serial number of the license that needs renewal.

3- Experience certificates of the licensee who needs renewal, covering all the activities related to operation he conducted during the license period, number of operating hours, number of controls of reactivity and capacity increase processes for reactors.

4- A report indicating the successful pass of the requalification program, with a documentary proof.

5- A letter from the operating body indicating the due satisfaction of the duties of the licensee who needs renewal during the previous license period, attached with a documentary proof.

6- A health certificate for the licensee who needs renewal, as per the requirements set forth in the Commission technical systems.

Article - 50

The Commission technical systems shall regulate the detailed qualifications and experiences required to obtain licenses to jobs at current or new power reactors, in no contradiction with the provisions of this regulations.

Article - 51

Registers for recording the radiological protection officers shall be maintained at the Commission as follows:

1) A register for the experts of protection from the dangers of exposure to radiations.

2) A register for the radiological protection officers.
3) A register for the radioactive source or substance users.
4) A register for doctors licensed to use radioactive sources or substances in diagnosis and treatment.
5) A register for radiologic technicians using radioactive sources or substances.
6) A register for radiologic technician assistants working in radioactive sources or substances.

The Commission shall further have registers to record operators of nuclear and radiation facilities licensed to operate such facilities.

Before recording in such registers, the following shall be met:

1- The applicant shall obtain the required license to exercise the activity, with the type of licensed activity being specified.
2- The license shall be effective.

Licenses issued after the date of forming the register shall be recorded upon their issuance. Licenses in effect before the formation of the register shall be recorded within one month from the date of informing the licensee to be registered, via a return - receipt requested mail.

Part - 4

International Transportation Via Air, Land And Sea Crossing Of The Radioactive Substances Or Wastes Or Their Transportation Means

Chapter - 1
Rules Of Air, Land And Sea Crossing And Obtainment Of The Commission Approval

Article - 52

No air, land or sea crossing of radioactive substances or wastes, or their transportation means may be allowed, even in the Exclusive Economic Zone and continental shelf, unless the approval of the Commission is obtained. In all cases, no transportation means carrying radioactive sources or substances or nuclear materials may cross the River Nile.

Air, land and sea crossing shall be subject to the following rules:

1- The nuclear safety during the transport of nuclear materials and radioactive substances shall initially be the responsibility of the consignor till the shipment is received by the forwarder who shall bear full responsibility during transportation till the delivery of the shipment to the consignee.

2- The consignor and forwarder shall be prepared to confront any incident and provide technical assistance to those dealing with emergencies.

3- Transportation of all nuclear materials and radioactive substances via transportation means shall be subject to the requirements, rules and standards provided for in this regulations and Commission technical systems.

Article - 53

The following rules, procedures and deadlines shall be followed before notifying the Commission of the crossing:

1- For radioactive wastes, the consignor shall obtain the approval of the Commission on each parcel, after ensuring that the consignee is authorized to receive the parcel. In case of international transportation, a copy of the authorizations that permit the parcel to enter the state- recipient of the radioactive wastes- and to pass through any other state shall be enclosed.

2- The forwarder shall inform the Commission of the date of arrival of the transportation means that loads nuclear materials or radioactive substances or wastes, before its arrival to the airspace or land or maritime boards or Suez Canal by minimum 48 hours, as per the Commission technical systems and standards and in pursuance of the provisions stipulated in the international agreements regulating the same, which are applicable in Egypt.

3- Documents and data signifying the satisfaction of nuclear material safe transportation requirements during crossing shall be presented.

Article - 54

Procedures of obtaining the approval of the Commission on the air, land or sea crossing shall include:

1- The forwarder or his agent shall apply to the Commission for obtaining its approval on crossing or passage, indicating all shipment data before crossing or passage by at least 48 hours, for radioactive substances and sources. For fissile materials as enriched uranium, Uranium-233, plutonium-239, other fissionable materials, nuclear fuel- of all kinds- and radioactive wastes, the forwarder shall obtain the approval of the Commission on crossing or passage before shipment via the transportation means, providing a documentary proof on the approval of the state, recipient of the radioactive wastes.

2- The applicant shall submit an effective insurance policy issued by a reputable insurance company or provide a complete financial coverage that satisfies all his civil liabilities for all nuclear damages that might arise due to a nuclear accident during transportation, in conformity with Part Six of the Law and Part Nine of these regulations.

3- Stipulated fees shall be paid.

4- The Commission shall issue its approval on crossing or passage, in case of satisfying the requirements of safe transportation of the shipment loaded on the transportation means, as per the international standards and the Commission technical rules and systems.

5- In case of non-conformity of the shipment with the data stated in the authorization application, the Commission may reconsider authorizing the shipment passage or crossing via the transportation means through the

Egyptian airspace and land and sea borders or the shipment handling to and from the transportation means as well as through Suez Canal, based on the new correct data. In case the Commission rest assured that the shipment poses no threats to the transportation means, as per the nuclear safety international standards and Commission systems, standards and requirements, the Commission shall issue its authorization for the passage, crossing or handling.

Article - 55

The Commission shall, in all cases, have the right to hold its authorization for the passage, crossing or handling of any shipment via the transportation means in the Egyptian airspace, land or sea borders, if it deems such as causing imminent threat to persons, environment or property, and also in case of the incorrectness of the shipment data compared to the actual case on the ground.

Chapter - 2
The Commission Role In Air, Land Or Sea Crossing And Transportation

Article - 56

The Commission shall undertake the following, in case of air crossing or transportation of radioactive substances:

1) Review documents of the forwarder, identify the type of the radioactive substance, its radioactivity, quantity and classification, as per the prescribed lists and determine the type of insurance required, as per the Commission systems.

2) Review the data and documents with forwarders on the plane, ensure their conformity with the actual shipment, in type and quantity, and ensure the issuance of the required insurance as per the regulations and systems.

3) Conduct radiation measurements on the surface of all transported parcels and match them with the documents.

4) Lay down plans and ideas for nuclear and radiological emergency response and preparedness, in case of any incidents at an Egyptian airport.

5) Instantly respond to emergencies that might result from a crash of an airplane carrying radioactive substances in the state airspace, by arriving to

the scene as soon as the time and circumstances allow, provide technical consultancy and conduct any inquiries or works under the management of plane accidents prevention team.

6) Adopt measures to search for radioactive parcels after accidents and detect them through radioactive monitors, detectors and radiation labels thereon.

7) Ensure that the unloading or loading of any radioactive substances are conducted after the approval of the Commission.

Article - 57

The Commission shall undertake the following, in case of sea crossing or transportation of radioactive substances:

1) Review shipment documents, specify the type of radioactive substance, its radioactivity, quantity and classification, as per the prescribed lists prepared by the forwarder and define the type of insurance required as per the Commission systems.

2) Review the data and documents with those in charge on board, ensure their conformity with the actual shipment, in type and quantity, ensure the issuance of the insurance required as per the regulations and specify the storage location of the radioactive substances on the ship.

3) Verify the authorization of the ship to transport radioactive substances.

4) Conduct radiation measurements on the surface of all transported parcels and match them with the documents.

5) Ensure that the forwarder of the radioactive substances has devised nuclear and radiological emergency plans among the general plan, to face emergencies on board, as per the international standards.

6) Ensure that the unloading or shipment of any radioactive substances is made under the approval and control of the Commission.

7) Should such substances be imported to or exported from Egypt through a port, the Commission shall inform the port, in case of transportation of radioactive substances via a ship, to increase the firefighting equipment readiness and provide the needed requirements. The Commission shall

further inform the body responsible for civil protection in cities at which transportation will take place to adopt precautionary measures.

8) Inform the civil protection public department at the Ministry of the Interior, in case of unloading the shipment in any Egyptian port.

9) Instantly respond to emergencies that result from the accidents of ships (as sinking, fire or otherwise) loading radioactive substances in the state maritime zone and crossing the watercourses, particularly in the territorial waters, by arriving to the scene as soon as possible, and implement the confrontation plans and ideas, under the management of the ship accidents prevention team.

Article - 58

The Commission shall carry out the following during the land transportation or passage of radioactive substances:

1) Review the shipment documents, identify the type of the radioactive substance, its radioactivity, quantity and classification, as per prescribed lists and determine the type of insurance required, as per the Commission technical systems.

2) Review the data and documents, match them with the actual shipment, in terms of type and quantity, and ensure the issuance of the required insurance.

3) Conduct radiation measurements on the surface of all parcels transported and match them with their respective documents.

4) Ensure the preparedness of forwarder for responding to emergencies that could occur to any radioactive shipment and his ability to deal with the accident.

5) Ensure that the forwarder personnel have received instructions to inform the police, consignor or any other relevant authority- upon the occurrence of an accident- then apply the emergency instructions, as per the rules and procedures prescribed in the Commission technical systems, standards and rules.

6) Ensure that protection officer (protection expert/ officer) accompanies the shipment, throughout its course of land passage or crossing.

The forwarded shall make available all information to persons at the place, even if they are incapable of interfering.

Article - 59

The Commission shall adopt the following procedures, in order to grant authorization for the passage in Suez Canal.

First- For radioactive substances and wastes:

1- Ensure the arrival of the documents of radioactive substance shipments at least 48 hours before the arrival of the ship.

2- The forwarder shall undertake to obtain the authorization of the Commission for the passage or crossing of the radioactive wastes, of all types, before their shipment on the transportation means, with the approval of the State to which the radioactive wastes are sent being submitted

3- Review the documents, specify the type of radioactive substances and wastes, their radioactivity, quantity and classification, as per the prescribed lists and determine the insurance required, as per the Commission systems.

4- Ensure that the relevant shipping agent has obtained permits and made arrangements for the Commission representatives to access the ship.

5- Review the data and documents with those in charge on board, ensure their conformity with the shipment, in type and quantity, ensure the issuance of the required insurance as per the regulations and specify the location of radioactive substances and method of their shipment.

6- Conduct radiation measurements on the surface of all transported parcels and match them with the documents. Should there be any outside damage to the parcel; samples shall be taken to ensure the absence of surface radioactive contamination.

7- The Commission representative shall issue required authorizations for the passage or crossing, after verifying the satisfaction of the previous procedures.

Second- For fissile materials or spent nuclear fuel:

1- The forwarder shall undertake to obtain the authorization of the Commission for the passage or crossing of fissile materials or spent nuclear fuel of all types, before their shipment via the transportation means.

2- The forwarder or his agent shall submit an application to the Commission, attached with a description of the shipment and package before shipment on board. The Commission shall study the documents to ensure the conformity of the shipment method and used container to the technical specifications and radioactive level outside the shipment containers, before granting an initial authorization for shipping via a ship through the Canal.

3- The Commission experts shall- on the specified date of the passage of the ship carrying the shipment- review the shipment official documents, inspect its contents on board, ensure the conformity of the documents and data with the shipment- in terms of type, quantity and parcels or containers numbers- check the packaging, determine its type and the extent of its conformity with the technical standards, measure the radiation levels outside the used packages or containers and check the arrangement of the parcels to avoid criticality that could take place due to the wrong shipment.

4- In the event that the crossing ship is transporting fissile materials, no hydrogenous substances or liquids- if any- may be placed at a distance less than 10 meters from the fissile materials, with barriers which absorb neutrons being placed, so as no critical reactions would take place. Furthermore, the ship shall head directly to its destination, without stopping at the dock of ships transporting hazardous substances at the Canal, without loading, shipping or unloading in Egypt.

5- The Commission representative shall issue final authorizations for passage and crossing, after checking the satisfaction of all the previous procedures, on condition that an expert from the Commission accompanies the shipment to guarantee continuous surveillance, if necessary, and till the complete passage or crossing of the ship carrying the shipment out of the Suez Canal.

Chapter - 3
Obligations And Responsibilities Of The Ministries And Bodies For The Safe Handling And Protection Of Radioactive Substances During International Transportation

Article - 60

Ministries of the Interior, Foreign Affairs, and other ministries concerned with Civil Aviation and Transportation, Suez Canal Authority, General Intelligence, Egyptian Atomic Energy Authority (EAEA) and other bodies shall- each in its field of competence- be responsible for adopting necessary measures for the safe handling of and protection of radioactive substances, during international transportation, as per the provisions stipulated in the international agreements regulating the same and applicable in Egypt, in case of land crossing of the Egyptian territories or stop at the Egyptian airports or seaports.

Obligations of the aforesaid ministries and bodies, their relations and measures they should adopt- in this regard- shall be determined as follows:

(a) Obligations of the Ministry of the Interior:

1- Receive notifications of the passage or crossing of radioactive substances from the Commission, before the transportation or passage date by minimum 48 hours. In urgent cases, notification may be served by minimum 24 hours.

2- Bodies following the ministry shall undertake to adopt measures to secure the transportation or passage of radioactive substances to the State, as per the route defined in detail in the Commission transportation or crossing notifications.

3- Ensure the presence of the radiological protection officer or expert responsible for the transportation or passage, equipped with radiation monitor and detects.

4- Approve the route proposed in the Commission notification. Should there be any hindrances that entail changing such route - due to any emergency - the change shall be approved to guarantee a safer complete route.

5- Secure the evacuation of the civilians from the hazardous area, in case of any accidents during the transportation or passage of radioactive substances, as per the plan to be agreed upon with the Commission

and the international and local regulatory guidelines, in coordination with the concerned bodies and ministries.

6- Promptly notify the Commission upon the theft or loss of any radioactive parcels and adopt necessary procedures, to investigate the reasons of the theft or loss.

(b) Obligations of the Ministry of Foreign Affairs:

1- Provide official channels through the Ministry to allow the Commission to inform IAEA and governments parties to the Convention of a Nuclear Accident of any accidents that take place on the Egyptian territories during the transportation of radioactive substances, if necessary, as per the decision of the Supreme Committee of Radiological or Nuclear Emergency.

2- Provide official channels through the Ministry to allow the Commission to address the governments of foreign countries and international organizations to seek their assistance in case of a nuclear accident on the Egyptian territories, if necessary, as per the decision of the Supreme Committee of Radiological or Nuclear Emergency.

3- Inform the Commission, as per the procedures followed during the passage of ships or submarines using nuclear energy, to adopt all necessary procedures in this regard.

(c) Obligations of the Ministry of Transportation:

1- Develop an information network on the capabilities of the transportation, means of transportation and safety of roads, within Egypt.

2- Prepare maps for the international and main roads at the governorates which can be used in case of international or local transportation of radioactive substances.

3- Organize railways and vehicles transportation, upon the evacuation of civilians from the hazardous area, in case of radiation or nuclear accidents, during transportation.

(d) Obligations of the Ministry of Civil Aviation:

1- Update and follow-up of the implementation of standard rules and restrictions regulating the handling of the hazardous cargo and

radioactive shipments and substances (imports/ exports) at the airports, cargo villages and international civil airports.

2- Spread awareness among the airport personnel and train them on dealing with the radioactive substances and using radioactive substances detectors and radioactive dose measurement devices.

3- Follow-up the updates at the national and international level and coordinate with concerned bodies to procure radioactive monitors (fixed gates for individuals and shipments- portable devices- radioactive dose measurement devices), for the safety of the personnel and citizens at the airports.

4- Allocate and prepare areas at the international general aviation airports that meet the standards required to store radioactive shipments and substances.

5- Regularly coordinate between the Ministry of Civil Aviation and bodies dealing with radioactive substances at the national level (Commission - Egyptian Atomic Energy Authority (EAEA) - Ministry of Defense) to check the precautionary measures for the safety of the personnel and citizens and prevention of radioactive substances release into the country, through airports.

6- Coordinate and cooperate with the Supreme Committee of Radiological or Nuclear Emergency to put the emergency control system into action during transportation and handling, upon the discovery of unsecured radioactive parcels or substances or upon their theft, loss or tampering at the Egyptian civil aviation airports, by the prompt notification of the center of operations and crisis management at the Ministry of Civil Aviation and adoption of necessary legal procedures.

7- Verify that international marks (as the code- radioactivity- transportation guide) are placed on the outer surface of the parcels and shipments which contain radioactive substances.

8- Make sure that the authorization of the Commission for the transport of radioactive substances is obtained.

9- Provide help and assistance to the Commission inspection teams to conduct their control procedures.

10- Coordinate with the General Intelligence on the issuance of security approvals - for the personnel using the radioactive monitors - on the method of diagnosing the actual injuries from the ionized radiations and rapid precautionary and treatment procedures that should be adopted.

11- Qualify and train medical personnel at the airports on the method of diagnosing actual injuries from ionized radiations and prompt precautionary and treatment procedures that should be adopted.

(e) Obligations of the Suez Canal Authority:

1- Allow no ships carrying nuclear materials or radioactive substances or wastes to cross the Suez Canal, unless an authorization for crossing is obtained from the Commission, as per the international rules of transporting radioactive substances as well as the applicable Suez Canal passage regulations and rules disseminated to the international maritime companies and organizations.

2- Provide assistance by available maritime potentials to execute the confrontation plan of nuclear accidents that could happen during the crossing of the Suez Canal, according to its role as specified in the radiological emergencies national plan.

3- Assist in facilitating the radiological monitoring across the Suez Canal.

4- Allow the presence of radiation measurement gadgets at the vehicles accompanying the units using nuclear energy, after the obtainment of all permits necessary for their presence from all concerned security bodies by the Commission.

(f) Obligations of the General Intelligence:

Conduct its role in pursuance of Law No. 100 of the year 1971 pertaining to the System of the General Intelligence and laws amending the same, regarding the administrative body as well as the state affiliated authorities and public and economic institutions.

(g) Obligations of the Egyptian Atomic Energy Authority:

1- Inform the Commission of all international and local transportation operations of nuclear materials and radioactive substances and sources it handles, imports or exports, at least one week before the shipment.

2- Prepare the details of emergency procedures, including cases of parcel damage, drop, fire and release.

3- Prepare parcels suitable for transportation. The Commission shall verify the adherence to the rules of safe transportation of radioactive substances, in the manner it deems appropriate

4- Receive the open radioactive substance or source parcels imported or locally produced which are used at the laboratories, hospitals, medical treatment centers and scientific research centers and deliver the same to those licensed o handle such parcels and those who have obtained the approval of the Commission on their importation or production.

5- Remove radioactive contamination from the contaminated areas or parcels or at the scene, participate in removal of the radioactive contamination of the personnel upon its occurrence, if required, and deal with the contaminated outputs through the Hot Laboratory Center following the EAEA.

6- Promptly inform the Commission in cases of theft or loss of or tampering with any parcels containing radioactive substances or wastes or nuclear fuel and adopt necessary procedures to investigate the reasons of such theft, loss or tampering.

(h) Obligations of the Commission:

1- Lay down the conditions and rules of transportation of radioactive substances, including the conditions and specifications of the containers, as per the relevant local and international requirements and standards.

2- Grant approvals on the importation, exportation and customs clearance and grant authorizations necessary for the transport and passage of radioactive substances or wastes or nuclear fuel, as per the procedures and rules stated in the present regulations as well as the systems, standards, rules and regulatory requirements issued thereby. Each parcel shall be approved according to the conditions specified for each type of parcels.

3- Verify the presence of appropriate transportation guides and international marks on the parcels.

4- Receive notifications from the licensee, forwarder or any other body, in case of theft or loss of or tampering with any parcel and adopt necessary procedures to investigate the reasons of theft, loss or tampering.

5- Review documents of the shipment and verify their conformity with the international standards as well as the contents of the shipment, as stated in the documents.

6- Provide the consultancy and help to the forwarder on the manner of response to the nuclear and radiological emergencies.

7- Measure the radiological exposure of the personnel and environment, in case of nuclear accidents during the transportation.

8- Conduct radiation measurements on the surface of the parcels.

9- Exchange information with Ministries of the Interior, Foreign Affairs, ministries concerned with Civil Aviation and Transportation, Suez Canal Authority, General Intelligence and EAEA on international transportation of radioactive substances.

Coordination between the Ministries of the Interior, Foreign Affairs, ministries concerned with Civil Aviation and Transportation, Suez Canal Authority, General Intelligence, EAEA and other relevant different bodies on international transportation shall be made, through different means, mainly:

1- Form a committee comprising parties representing Ministries of the Interior, Foreign Affairs, ministries concerned with Civil Aviation and Transportation, Suez Canal Authority, General Intelligence, EAEA and other relevant different bodies, which its members are among the top management of the ministry or the body they represent, to oversee the implementation of the obligations, measures and responsibilities of each ministry, authority or body.

2- Forge ideas by each ministry, authority or body regarding different international transportation processes, in coordination with the Supreme Committee of Radiological or Nuclear Emergency, each in its field of competence. Each body shall put such ideas as well as a plan for management of potential accidents during transportation into action- upon its notification of the international transportation of radioactive substances.

Part - 5

Concerning Import, Export and Transport Of Radioactive Sources and Substances

Chapter - 1
Import Or Export Approval Prerequisites

Article - 61

In order to obtain an approval on exporting or importing radioactive sources and substances, the applicant shall meet the following prerequisites:

1- Obtain a license to handle and use radioactive sources and substances - to be imported or exported- or obtain a license to operate gamma irradiation facilities and electron and ion accelerators.

2- Provide all technical data on the device and its accessories - to be imported or exported - which will contain the radioactive sources and substances and obtain the approval of the Commission on its conformity with the safety specifications.

3- Procedures and requirements of radiological protection shall be conducted by an approved protection officer or expert, recorded at the respective registers at the Commission, where his obligations shall be determined in the Commission technical systems.

4- Submit a statement indicating the manner of the applicant in dealing with the expired or dumped radioactive sources and substances, whether by re-exporting them to their source or by disposing of them through radioactive waste management facility.

Article - 62

A register shall be maintained at the Commission for keeping the approvals of importation or exportation of the radioactive sources and substances, subject to specifying the type of radioactive source and substance approved to be imported or exported and to have the approval in effect.

Recording in such register shall be made within one month of the approval issuance date.

Chapter - 2
Parcel Transportation Rules And Procedures

Article - 63

Except for the passage in Suez Canal, as regulated in Article (59) of the present regulations, no radioactive substance parcels may be transported by different transportation means (by air, land or sea), unless a prior consent is obtained from the Commission, as per the conditions stated in this regulations and international standards in this regard as well as the Commission technical systems, standards, rules and requirements and after coordination with the State concerned bodies.

In all cases, river transportation of any radioactive sources and substances or nuclear materials shall be prohibited.

Article - 64

Radioactive substances may not be transported except in special containers that satisfy the conditions approved by the Commission. The container and its contents is called a "parcel".

The following rules and procedures shall be followed in transporting parcels containing radioactive substances:

1- The consignor shall classify the parcels as per the acceptable international classifications, as prescribed in the safe transportation rules of the radioactive substances and nuclear materials, issued by the Commission.

2- The Consignor shall undertake that the radioactivity of the contents of the parcels will not exceed the limits designated for such parcels and limits of the transportation means. The parcels may not further contain any other cargo, except for the documents and equipment necessary for the use of the radioactive substances.

3- The consignor shall place suitable marks and labels, as radioactive signs, transportation guide, UN number, in a clear and fixed place at the surface of the container.

4- The Commission shall specify the detailed rules of types of containers used in transporting the radioactive sources and substances, which should obtain an approval on their shipment.

5- The forwarder shall- upon transporting an empty container previously used in transporting radioactive substances- ensure that it is not radioactively contaminated. He shall further erase the labels and signs of the previous transport.

6- The forwarder shall examine the transportation means and equipment repeatedly used in transporting radioactive substances, to verify their non-contamination.

7- The forwarder shall- in case of doubting the presence of a defect in or release from certain parcel or after an accident during transportation- set aside the parcel, call the protection expert to examine the parcel, tools used and shipment and distribution places, identify the level of radioactivity and determine accordingly necessary procedures.

8- The forwarder shall- upon the occurrence of radioactive release from certain parcel during transportation that exceeds the authorized limits- keep the parcel in a safe place under his control, as per the relevant international standards applicable by the Commission and no transportation may continue till the parcel is repaired and contamination is removed.

9- The forwarder shall separate the parcels containing radioactive substances during transportation from other hazardous materials as explosive and hazardous chemical materials, in conformity with the hazardous substances transportation rules.

10- The forwarder shall separate the parcels that contain radioactive substances during transportation and temporary storage from places allocated for individuals.

11- The forwarder and consignee shall- in coordination with the Commission- refrain from conducting customs procedures that imply examination of radioactive contents in a certain parcel, except at places well-equipped to monitor the exposure to radiations, in the presence of qualified personnel. Any parcel being opened upon the customs instructions shall be restored into its original state before its shipment to the consignee.

12- The forwarder shall adequately secure the parcels containing radioactive substances, during transportation, as follows:

(a) In case of failure to deliver certain parcel, it shall be placed in a safe place and the Commission shall be promptly informed to adopt necessary measures.

(b) Promptly inform the Commission in case of loss of any parcel, adopt necessary measures to investigate the reasons of such loss and minimize the risks that might result therefrom.

In all cases, the consignor, consignee and forwarder, each in its field of competence, shall minimize the radioactive contamination on the surface of the parcels, without exceeding the authorized limits, prescribed in the Commission technical rules and systems.

Article - 65

The consignor and forwarder shall abide by the general rules and obligations of radiological protection, as per the Commission technical systems, standards and rules, in particular:

1- Lay down a radiological protection program for transportation.

2- Adequately train the qualified personnel on the radiological protection during transportation.

3- Estimate the dosage that the persons might be exposed thereto during transportation.

4- In all cases where the radiation level is monitored at workplaces or for persons, registers for such monitoring shall be maintained to estimate the personal doses.

5- Apply a suitable quality assurance program.

Article - 66

The consignor shall obtain the approval of the Commission on each parcel, as per the conditions of each type of parcels and ensure the approval obtainment by the consignee to receive the parcels. In cases of international transportation, a copy of the authorizations obtained to allow the parcel to enter to the country of destination and to pass through other countries shall be annexed.

The consignor shall abide by the following:

1- Assume full responsibility for the safety and protection before delivery of the parcel to the forwarder.

2- Satisfy all requirements regarding the container design.

3- Devise the appropriate emergency plan for the transportation operations to be carried out, till the arrival of the shipment to the port of country of destination.

4- Abide by the international rules of radioactive source and substance transportation and conditions of the present regulations regarding the safe transportation of the aforesaid.

5- Hand over a copy of the emergency plan to the forwarder, who shall be willing to engage in responding to emergencies, in case of an accident.

6- Send an equipped team to deal with the accident, when necessary.

7- Provide all data and information on the shipment.

8- Verify that the consignee is licensed to exercise nuclear activity or radioactivity connected to the shipment, subject matter of the parcel.

The consignee shall abide by the following:

1- Develop a suitable emergency plan to deal with accidents, during transportation from delivery point till the facility, as per the Commission technical systems, standards, rules and requirements mentioned in its technical regulations, in compliance with the relevant international standards.

2- Check that the consignor had attached all required documents and information with the shipment and a copy of the certificates approving the shipment and container design.

The forwarder shall abide by the following:

1- Adhere to all regulations of the safe transportation of radioactive sources and substances he transports, which are stated in the Law, the current regulations, the Commission technical systems and standards and

international agreements applicable in Egypt and precisely implement the said.

2- Train radiological protection personnel on the procedures to be adopted in case of accidents.

3- Estimate and record the dosage to which the personnel engaged with transportation might get exposed.

4- Place emergency instructions in an apparent place inside the transportation means.

5- Train transportation personnel on the procedures to be adopted in case of accidents.

Article - 67

Parcel transportation documents shall include:

1- Enough data on the radioactive substances and their radioactivity, during transportation process, in addition to some information on their chemical and physical structure.

2- Relevant international marks and labels as UN number, transportation guide and type of parcel.

3- A statement signed by the consignor indicating that the mentioned information match the shipment and that they are in line with such rules.

4- Instructions on any special procedures the forwarder should follow as the procedures of loading, temporary storage, shipment, unloading and any other limitations to the transportation means authorized to be used as well as the emergency plan procedures suitable for shipment. The forwarder shall abide by such instructions.

Article - 68

The Commission shall- through the authorization of transportation - verify the adherence of the consignor, consignee and forwarder to the rules and procedures regulating the transportation of the nuclear materials and radioactive substances and necessary measures for protection from radiation, including all

rules, procedures and measures mentioned in this Part, as prescribed in the Commission technical systems and rules.

Part - 6

Safe Disposal Of Radioactive Wastes

Chapter - 1
General Conditions

Article - 69

No radioactive waste disposal or handling facilities may be established, unless a license is obtained from the competent governorate, after the approval of the EAA on establishing the facility and consulting the Ministry of Health, the Ministry of Manpower and the Commission, and after meeting all conditions that guarantee the safety of the environment, civilians and personnel thereat.

Disposal of radioactive wastes shall be carried out, as per the conditions and standards stipulated in the Commission technical systems, standards, rules and requirements.

Minister of Housing shall- after seeking the opinion of the Ministry of Health and EAA - determine the available places and conditions of licensing the disposal of radioactive wastes.

Article - 70

The Egyptian Atomic Energy Authority (EAEA) shall- under the supervision of the Commission and in pursuance of the rules and procedures stated in this Part and in the Commission technical systems, standards, rules and requirements - safely and securely dispose of the previously dumped radioactive wastes, should there be no party responsible therefor, without prejudice to its right to identify such responsible party and legally pursue him, by conducting - jointly or severally - investigations on the natural or juristic person responsible for the production of such radioactive wastes. Towards that effect, the Authority may conduct necessary and suitable analyses to such wastes to identify its source and may further require data on such radioactive wastes, whether from the State different bodies or bodies abroad.

The Commission shall establish the violation of the party responsible for the production of such wastes by a report, based on which legal proceedings and penalties shall be applied, as per the provisions stated in Part seven of this Law.

Chapter - 2
Obligations And Responsibilities Of The Egyptian Atomic Energy Authority (EAEA) Upon The Safe And Secure Disposal Of Radioactive Wastes

Article - 71

EAEA shall obtain a license from the Commission for each transportation process of radioactive wastes separately, on condition that the license application shall include information on the quantities to be transported, nature of transported wastes, precautions adopted to protect the personnel, civilians and environment. The Commission shall review all information stated in the license application and verify their conformity with the radiation control standards stated in the Commission technical standards, rules and regulations.

Article - 72

The EAEA shall - upon transporting radioactive waste- follow safety rules adopted in transportation operations as well as the technical requirements and standards prescribed in the Commission regulations.

Article - 73

EAEA shall submit an application to the Commission to obtain a license to conduct treatment, preparation, disposal and temporary and permanent storage of radioactive wastes. The application shall be accompanied by a safety analysis report of which items should be determined as per the requirements and standards stipulated in the regulations of the Commission. The Commission shall review, assess the report and inspect the facilities, to verify the correctness and accuracy of the data stated therein. In case of satisfaction of the required safety requirements, the Commission shall issue the license, for a specified period of time and shall conduct periodical inspection and control over the facilities, subject matter of the license.

Article - 74

EAEA shall - upon preparing and treating the radioactive wastes - abide by the requirements and standards specified in the Commission regulations.

Chapter - 3
Obligations Of Bodies Producing Radioactive Wastes And The Commission Role

Article - 75

Licensed radioactive waste producer shall abide by the rules and guidelines specified by the Commission, particularly:

1- Abstain from the excessive use of nuclear materials and radioactive sources beyond the amount specified in the license. Such materials and sources shall be used in pre-planned operations, in a safe and secure handling manner.

2- Keep the amount of resulting radioactive wastes to the minimum.

3- Establish a system for sorting and collecting radioactive wastes, as per the guidelines of the Commission.

4- Keep the size of radioactive wastes disposals within the prescribed limits, as set forth in the Commission technical systems and standards.

5- Own the equipment and devises suitable for measuring the suitable limits applicable on the resulting radioactive wastes.

6- Develop and apply operation rules and control systems, in a way that guarantee that the waste packages sent for either storage or burial are in conformity with the data submitted regarding the radiation content, form of wastes and quality of the package.

7- Maintain registers containing new data on:
   - Radioactive wastes stock.
   - Radioactive wastes already disposed of or sent to be disposed of in air or in the public sewer.

8- Submit a periodical report to the Commission, every 6 months, on the radioactive wastes, their stock, what has been disposed of or sent to be disposed of in air or in the public sewer.

The duties of the radioactive waste producer shall be confined to the activities conducted within his site, which are sorting, collection, temporary storage, controlled disposal, monitoring and documentation of radioactive

wastes, whereas the other activities as transportation, treatment, preparation, storage, shallow burial and long storage shall be the tasks of the radioactive waste management facility following the Hot Laboratory Center at the EAEA, under the control of the Commission.

Article - 76

The Commission shall issue licenses for handling radioactive wastes, as per the rules and requirements prescribed in the Commission technical systems and standards. The Commission may- when necessary- lay down new or supplementary conditions, specifications or guidelines and may particularly:

1- Examine the license applications and ensure the presence of the suitable environment and capabilities for handling and keeping resulting radioactive wastes, as per the requirements and standards prescribed in the Commission technical systems and rules. The Commission may specify the cases according to which the applicant shall adjust.

2- Guarantee - through inspection- that the waste management activities are safely conducted, as per the rules, standards and requirements detailed in the Commission technical systems and rules.

3- The Commission may request corrective measures, in case of any violations and may suspend the license.

Article - 77

The radioactive wastes producer shall sort and collect solid and liquid wastes at source, as per the requirements, instructions and standards, specified by the Commission technical systems and rules.

Article - 78

Those licensed to acquire, handle or use the radioactive sources shall obtain the approval of the Commission on re-exporting such sources after their consumption to the country of origin or their transport to the radioactive waste management facility- upon the failure of re-exportation, under the supervision the Commission. The radioactive wastes producing body shall temporary store such sources, till their transport to the radioactive waste management facility, as per the conditions and rules of temporary storage and the Commission technical requirements and standards.

Article - 79

The radioactive wastes producing body shall- upon disposing of the liquid radioactive wastes to public sewer, abide by the conditions, rules, requirements and standards specified in the Commission technical systems and rules, in coordination with the Ministries of Health and Environmental Affairs.

Article - 80

If the radioactive wastes contain radionuclides of a short radioactive lifetime, the licensee shall be permitted to temporarily store them for a period of time that allow the natural radioactive decay to bring the radioactivity of the wastes to the value at which they can be disposed of, as per the permissible limits, as per the Commission technical systems, standards, requirements and rules, in coordination with the Ministries of Health and Environmental Affairs.

Article - 81

Operator of the licensed radioactive waste management facility shall submit an application to the Commission for the approval of each separate radioactive wastes transport, as per the rules and instructions of the Commission. The application shall include data on the amounts to be transported, nature of transported radioactive wastes, precautions adopted to protect the personnel, civilians and environment. The operator shall- upon transportation- adhere to all the Commission technical systems, standards, rules and requirements.

Article - 82

Operator of the licensed radioactive waste management facility shall apply to the Commission for obtaining a license for treatment and preparation. The application shall be accompanied by the safety analysis report, with the following being incorporated:

a) A detailed description of the treatment and preparation unit at the facility, and indication of the steps of treatment and preparation, attached with illustrations.
b) Services (energy- water- sewerage- steam- fire protection- ventilation, etc..)
c) Radioactive impacts in case of normal operation or in emergencies.
d) Measures adopted to avert accidents and minimize their consequences.
e) Details of the emergency plan.

f) A list of radiation dosage measurement devices, suitable for use.
g) Operation plan.

Article - 83

Operator of the licensed radioactive waste management facility shall - upon the treatment and preparation of the radioactive wastes, other than the spent nuclear fuel- use available technologies, conditional on verifying their satisfaction of the safely rules prescribed by the Commission.

Part - 7
Nuclear And Radiological Emergencies

Chapter - 1
Contents Of The National Emergency Plan And Rules And Procedures Of Notification

Article - 84

Subject to the provisions of articles (63 and 64) of the Law, the national emergency plan for the confrontation of the nuclear and radiological emergencies shall contain the role of each of the State-concerned bodies, particularly:

1- Determine the sources of dangers, classify the accidents and imagine their expected scenarios.

2- Identify the human and financial resources, equipment, available preparations, medical care and evacuation places that can be used at the State level and potential international aids that could be obtained, as per the treaties on which Egypt has ratified.

3- Means of announcing the start of the emergency, its end and restoration into its normal state.

4- Rules of confrontation levels, emergency squads and precautionary measures for such squads.

5- Proposed form of the emergency squads, on case by case basis.

6- Periodical programs developing scenarios for the potential nuclear or radiation accidents, to ensure the ability of the emergency squads to conduct their tasks.

7- Communication programs and notification methods.

8- Comprehensive programs to eliminate the internal and external contamination of the personnel, equipment, furnishings and buildings.

9- Necessary framework for informing the civilians, providing them with the available data and statistics using required means of awareness and defining the potential perils and methods of protection therefrom.

10- Identify the obligations of the local administrative units which the nuclear or radiation facility or nuclear or radiological emergency falls under their jurisdiction, as regards the provision of all means and capabilities that help confront the nuclear or radiological emergency in their area and train those engaged therein, in cooperation with the Commission, EAA at the Ministry of Environmental Affairs, Civil Protection Department at the Ministry of the Interior, Ministry of Health, Ministry of Transportation and relevant governorate.

Article - 85

The confrontation plan outside the site shall include the following detailed plans:

- Notification plan- Civilians warning and information plan- Rescue plan
- Civilian evacuation plan
- Iodine distribution plan
- Civilians protection plan inside homes and shelters
- Personnel protection plan during displacement and housing plans (radiological protection and security)
- Housing plan
- Monitoring plan
- Persons and vehicle movement plan during displacement operations
- Water and food distribution plan on the displaced at housing sites
- Measurements plan to estimate the probabilities of radiation in the contaminated areas
- Communication plan with civilians and media
- Contaminated corpse handling plan
- Contamination removal plan outside the site
- Handling plan of radioactive wastes resulting from emergencies

Article - 86

The Commission shall exercise the regulatory and control tasks in the fields of planning, preparedness for and confrontation of nuclear and radiological emergencies as follows:

1- Ensure the preparation of a comprehensive radiological emergency plan and permanent preparedness for nuclear and radiological emergencies at all nuclear and radiation facilities as well as laboratories and plants handling

nuclear materials or radioactive sources and substances and during the exercise of nuclear activities and radioactivity.

2- Be prepared for confronting the nuclear and radiological emergencies, during the planning and preparedness phase and during and after the end of the emergency, as per the Commission technical rules and guides.

The Commission shall conduct its role specifically as follows:

First: During the planning and preparedness phase:

a) Determine the emergency cases in the nuclear and radiation facilities and values of the radioactive emissions during accidents classified as an emergency outside the site.

b) Coordinate with the involved national bodies to develop the national radiological emergency plans and be prepared for confronting the emergencies, in coordination with operators of nuclear and radiation facilities, in pursuance of Article (64) of the Law.

c) Follow-up the cooperation between the operators of the nuclear and radiation facilities and competent national bodies in developing harmonized emergency plans and keep them in preparedness state.

d) Review, evaluate and approve the emergency plans of the nuclear and radiation facilities.

e) Ensure the application and integration of the national plan for nuclear and radiological emergencies with other non-nuclear nor radiological emergency plans at the State.

Second- During the emergency:

a) Provide the technical and material assistance, including emergency squads following the Commission, to extend a hand in facing the critical nuclear and critical radiological emergencies, beyond the control of the operator, in coordination with the Supreme Committee of Radiological or Nuclear Emergency.

b) Review and control procedures conducted by the bodies responsible for confronting emergencies at the nuclear and radiation facilities, in

coordination with the Supreme Committee of Radiological or Nuclear Emergency.

c) Inform the civilians of the occurrence of the emergency.

d) Provide consultancy to end the emergency.

Third- After the end of emergency:

a) Review and approve the activities related to the protection of civilians from the radioactive contamination and minimize the consequences of the accident.
b) Announce the restoration of the facility to its original state.
c) Approve the resumption of the facility operations, when prepared.

Article - 87

The licensee shall inform the Commission in writing upon his knowledge of the loss or theft of any shipment containing radioactive substances, according to the following rules and procedures:

1- The licensee shall forthwith notify the Commission of the incident of loss or theft.

2- The facility manager shall inform the Commission head or his deputy of the incident by phone, followed by a written notification bearing the same message conveyed via phone. Such notification may be made through fax or any other approved and swift written means.

3- The licensee shall prepare a report on the incident of loss or theft, to be submitted to the Commission within an hour of the incident, followed by a set of successive reports on the developments of the incident, with a reference being made in each report to the numbers of previous reports and their dates of submission. Each and every report should include information that would allow the Commission to assess all matters related to the safety and security of the nuclear and radiation facilities.

4- The licensee shall prepare a special register to track all incidents of theft or loss of any shipment containing radioactive substances.

In all cases, and after any such incident of loss or theft of any shipment containing radioactive substances, the facility may not resume its operation, unless a written approval by the Commission is obtained.

Article - 88

The licensee shall promptly notify the Central Room of Nuclear and Radiological Emergencies at the Commission of all the data and information available thereat, in case of a nuclear accident, in pursuance of the following procedures:

1- Upon his knowledge of the accident, notify the Central room of Nuclear and Radiological Emergencies at the Commission, according to the list of names and information mentioned in the facility emergency plan, as approved by the Commission upon application for the license.

2- The notification shall contain the following data:
   1- Name, address and telephone of the notifier, location of the accident and classification of the emergency, if possible.

   2- A detailed description of the accident.

   3- Time, date and nature of the accident, whether it is a fire, explosion, contamination, etc..

   4- Possible or real reason (If known) of the nuclear or radiation accident and its expected developments as regards the emission of the radioactive substances.

   5- The general properties of the released radioactive substances, including their nature, chemical and physical structure, quantity, potential composition, impact of released substances and procedures outside the site, whenever possible.

   6- Information on the current and expected weather and water conditions (hydrological conditions).

   7- Environmental monitoring results.

   8- Adopted or planned precautionary measures outside the site.

   9- Time of contacting the concerned body to start intervention.

   10- The extent of response of the coordinating bodies after their notification of the accident.

11- Indication of the number of radiological injuries among personnel, severity of injuries, if any, whether the facility safety is under control and extent of exposure of the civilians to perils.

12- Adopted procedures to immediately start intervention.

13- Adopted procedures to minimize the consequences of the accident.

14- Type of the required assistance.

Persons licensed to operate a facility or exercise radioactivity shall promptly inform the Central Room of the Nuclear and Radiological Emergencies at the Commission of all the data and information available thereat, upon the occurrence of the radiological emergency, as per the following procedures:

1- Upon knowledge of the accident, the licensee shall promptly inform the Central Room of the Nuclear and Radiological Emergencies and the Commission head, according to the list of names and information available in the facility emergency plan, as approved by the Commission, upon the license application.

2- The notification shall include the following data:

1- Name, address and telephone of the notifier, location of the accident and classification of the emergency.

2- The notification shall include a description of the emergency.

3- Time and date of the start of the emergency and nature of the accident, whether fire, explosion or contamination, etc..

4- Time of contacting the concerned body to start the intervention.

5- Extent of response of the coordinating body, after being notified of the emergency.

6- Nature of the radioactive substance and whether it is a closed or open radioactive source or radioactive wastes.

7- Type and quantity of the radionuclides emitted or expected to be emitted.

8- Impact of emitted substances and procedures outside the site.

9- Cause of accident, according to the initial estimate.

10- Indication of the number of radiological injuries among personnel, severity of injuries, if any, whether the facility safety is under control and extent of exposure of the civilians to perils.

12- Adopted procedures to immediately start intervention.

13- Adopted procedures to minimize the consequences of the accident.

14- Type of the required assistance.

Chapter - 2
Tasks Of The Commission Concerning The Provision Of Information And Seek Assistance In Cases Of Nuclear Accidents And Radiological Emergencies

Article - 89

In case of a nuclear accident or radiological emergency of which threat extends beyond the state boundaries, the Commission shall inform the IAEA and states affected by the dangers of such accident, in pursuance of the provisions of the Convention of Early Notification of Nuclear Accident as approved by the Presidential Decree No. 402 of the year 1987 and after the approval of the Supreme Committee of Radiological or Nuclear Emergency.

Tasks of the Commission as a liaison for the IAEA as regards the Convention of the Early Notification of Nuclear Accidents shall be specified as follows:

1- Receive and submit notifications from or to the IAEA or from or to other liaisons at other countries which might be harmed by the accident, with respect to the nuclear accidents and radiological emergencies, illegal use or acquisition of nuclear materials or real threat resulting from such acts.

2- Notify IAEA or liaisons at other states of the nuclear accidents and radiological emergencies that occur in Egypt and of the information related thereto, in pursuance of the international obligations of Egypt, in coordination with the Ministry of Foreign Affairs and General Intelligence.

Article - 90

The Commission shall be a liaison for providing information and seeking assistance in case of nuclear accidents and radiological emergencies, in pursuance of the provisions of the Convention on Assistance in case of a Nuclear Accident or Radiological Emergency, as approved by the Presidential Decree No. 402 of the year 1987, according to the following systems and procedures:

1- The Commission shall- as a liaison working 24/7- provide information, receive assistance requests and receive and accept assistance offers, after the approval of the Supreme Committee of Radiological or Nuclear Emergency. The Commission shall exercise its works as a liaison, based on the resolutions of such Committee.

2- The Commission may seek assistance in case of nuclear accidents or radiological emergencies - whether directly or through IAEA - from any state party to the Convention on Assistance in case of a Nuclear Accident or Radiological Emergency, the IAEA or any other inter-governmental organizations, if required, in coordination with the Ministry of Foreign Affairs, after the approval of the Supreme Committee of Radiological or Nuclear Emergency.

3- The Commission shall - upon seeking assistance - define the scope and kind of required help. The Commission shall furnish the party which would provide the help with necessary information to enable the latter to determine its ability to meet the Commission assistance request. Should the Commission fail to determine the scope and kind of such required assistance, the scope and kind of such help shall be determined through consultation between the Commission and the State or the body from which assistance is sought.

4- The Commission may - if necessary - seek assistance, whether from other State party to the Convention or from IAEA. The Commission shall verify whether it is a free or charged assistance. Such assistance shall include the provision of medical treatment to the inhabitants affected by the nuclear accident and radiological emergency or temporary placement of such inhabitants to the territory of another State party to the Convention, in coordination and collaboration with Ministries of Foreign Affairs, Defense, Health, Interior and Transportation and the General Intelligence.

5- The Commission may ask IAEA to coordinate the process of provision of assistance required from another state party to the Convention.

6- The Commission shall- in coordination with the Supreme Committee of Radiological or Nuclear Emergency - direct, control and supervise the process of assistance within Egypt. Should the provided assistance include individuals from the state providing the assistance, the Commission shall in consultation with such state designate the person to be charged- on the ground- with the supervision of the equipment and personnel supplied by such state. Such person shall conduct his supervision, in collaboration with the Ministries of Foreign Affairs, Defense, Health, Interior and Transportation as well as the General Intelligence.

7- The Commission shall oversee the process of providing facilities and services by the state or body providing assistance within Egypt, to ensure the proper and effective management of the assistance. The Commission shall further guarantee the safety of the personnel, equipment and materials sent to Egypt for such purpose, in coordination with the Ministry of the Interior.

8- The Commission shall safeguard the ownership of the equipment and materials provided by any state as assistance and ensure their return, in coordination with the Ministries of Trade and Industry, Finance, Interior and Transportation.

9- The Commission may request ending assistance provided- at any time- after serving a written notice and consult with the party providing assistance to take necessary arrangements to end such assistance.

Article - 91

The licensee shall require assistance from governmental and non-governmental Egyptian bodies and organizations and relevant foreign bodies, in case of nuclear accidents and radiological emergencies, in pursuance of the following rules and procedures:

1- The licensee shall require assistance from the Egyptian bodies and organizations and relevant foreign bodies in order to carry out prompt procedures to prevent the aggravation of the accidents and to protect the personnel inside the site.

2- Assistance shall be sought at the local level from the governmental bodies charged with providing instant support to the user and protection to the civilians, whereas assistance shall be sought at the national level with respect to the procedures that don't need prompt implementation, including the procedures that aim at supporting the user, providing protection on the long-run and supporting the capabilities at the local level, if required.

3- Assistance sought from the governmental or non-governmental Egyptian bodies shall be submitted by the person charged with notifying accidents, according to the level of the accident in the plan previously approved and submitted by the licensee to the Commission.

4- The licensee shall inform the Commission of the content of the assistance request the former addressed to different bodies and shall further seek assistance from the emergency squads, after informing the Commission of the said.

5- The licensee shall seek the assistance from relevant foreign bodies- in case of nuclear accidents and radiological emergencies - through the Commission which constitutes the liaison regarding the provision of information and seek of assistance, in case of nuclear accidents and radiological emergencies, in pursuance of the Convention of Early Notification and the Convention on Assistance, insofar as the request of the licensee is in concurrence with the provisions of the Law, this regulations and international obligations of Egypt, after the approval of the Supreme Committee of Radiological or Nuclear Emergency.

Part - 8

Nuclear Safeguards And Nuclear Security

Chapter - 1
Nuclear Safeguards

Article - 92

The Commission shall implement the provisions of Egypt Nuclear Material Control and Accountability system referred to in Article (71) of the Law, based on "the concept of Material Balance Area (MBA)". Towards such effect, the Commission may adopt necessary measures in each nuclear facility and in any site outside such facility which contains nuclear materials, abiding by the following rules and standards:

1- Assess and approve measurement systems to specify the kinds and quantities of nuclear materials received, produced, shipped or lost or materials that are struck off the inventory regarding their preciseness as well as the quantities still included in inventory.

2- Assess and approve the destruction and non-destructive assays, in respect of their precision and accuracy, estimating the degree of their correctness.

3- Lay down and approve the nuclear material identification procedures through their weight and enrichment and review and assess the differences in the measurements of the sender and recipient.

4- Review and approve the physical inventory procedures.

5- Review and approve the procedures of assessing the accumulations of the available and lost stock that cannot be measured.

6- Assess and approve the registers and reports system which indicates the available amount of nuclear materials at each MBA and changes in such materials, including the quantities entered into or transferred out of the MBA.

7- Set out the systems and rules necessary for verifying that the accounting procedures and arrangements are correctly implemented.

8- Set out necessary procedures to verify the facility design information, submitted by the licensee.

Chapter - 2
Nuclear Security

Article - 93

The Egyptian nuclear security system at the Commission shall ensure the presence of needed protection systems for the nuclear and radiation facilities and for used or stocked nuclear materials and radioactive sources, in particular, those internationally transported. Towards this effect, the system may conduct systems' review and field inspection on the forgoing.

Article - 94

The Commission shall define the requirements of physical protection of used, stocked and currently transported nuclear materials and of the nuclear facilities, in a way that prevent the withdrawal of the nuclear materials without a permit or destruction of the nuclear facilities. The Commission shall review the emergency plans prepared by the licensee to confront the non-permitted withdrawal and use of nuclear materials or the destruction of the nuclear materials or faculties.

Article - 95

The licensee or the owner of the facility or the activity shall bear the responsibility of providing the nuclear security regarding the facilities, nuclear activities, radioactivity, nuclear materials and nuclear fuel and radioactive sources, including radioactive wastes and spent nuclear fuel.

Article - 96

Those licensed to have any facility or conduct a nuclear activity or radioactivity shall define the sources of threat that can harm the properties, facilities and environment as theft, embezzlement and sabotage and shall devise enough plans to face such threat through the concept of preparedness for threat, in the design of the nuclear security system, and provide such to the Commission for its review and approval, in coordination with the Ministries of Defense, Interior and Foreign Affairs and the General Intelligence.

Article - 97

The licensee shall lay down the necessary nuclear security systems and plans, in the framework of cost - benefit analysis, for the enhancement of

security (gradual approach) to handle all kinds of anticipated threats to the facility, nuclear activity, radioactivity or nuclear materials and present the nuclear security report to the Commission for its approval.

Article - 98

The licensee shall implement the system approved by the Commission to realize nuclear security of the facility or nuclear activity and provide full protection. Such system shall be subject to the direct control of the Commission to ensure its effectiveness. Such control shall include inspection on all components of the used system, if necessary.

Article - 99

The Commission shall identify and classify the nuclear materials and radioactive sources at the State into classes specified by the Commission technical regulations, systems, standards and rules, from the prospective of the nuclear security of the nuclear materials and review the measures that should be adopted in each class for protection according to their danger, in the framework of the cost-benefit analysis to enhance security (Gradual approach).

Article - 100

The Commission shall keep confidential any information or documents of secretive nature with respect to the physical protection systems. The Commission shall further define the secrecy requirements of such systems and their related precise information documents or details which their unpermitted disclosure may affect the physical protection of the nuclear materials and nuclear facilities.

Article - 101

The Commission shall define the type of restrictions that should be imposed on examining the critical information, by confining such task to the personnel whom their work necessitates examining such information. Maximum protection shall be provided to information related to any loopholes in the physical protection systems.

Article - 102

The Commission may cooperate with or consult concerned bodies locally in matters related to the physical protection and its development. The

Commission may further consult foreign bodies, in case of cooperation to restore any materials exposed to theft or loss, through State official bodies, in coordination with the Supreme Committee of Radiological or Nuclear Emergency.

Part - 9

Third Party Civil Liability For The Nuclear Damages

Chapter - 1
Bases Of Determining The Amount Of Insurance Or Financial Guarantee

Article - 103

The Commission shall issue the systems that determine the amount of insurance or financial guarantee which the operator shall abide by - upon obtaining his license to erect or operate a nuclear facility - to cover his liability for nuclear damages that are established to be due to a nuclear accident that occurred in his facility.

Amount of insurance or financial guarantee shall be determined by the Commission based on the following:

1- Nature of the nuclear facility for which the amount of insurance or financial guarantee is required to erect or operate such facility

2- The damages that might cause a nuclear accident due to the facility for which the amount of insurance or financial guarantee is required to erect or operate such facility.

The Commission shall issue the systems that determine the amount of insurance or financial guarantee which the operator shall abide by. The operator shall undertake to provide a certificate indicating his coverage for his liability for nuclear damages that might be caused by a nuclear accident during the transport of nuclear materials, under the conditions specified in Article (80) of the Law.

Amount of insurance or financial guarantee shall be determined by the Commission based on the following:

1- Nature of nuclear materials required to be transported.
2- The radiation potential of nuclear materials required to be transported.
3- The damages that might cause a nuclear accident, during the transportation of nuclear materials.

Chapter - 2
Conditions Of The Insurance Or The Financial Guarantee

Article - 104

Insurance or financial guarantee provided on applying for a nuclear facility erection or operation license shall meet the following conditions:

1- The contract of the Insurance or financial guarantee shall be in effect throughout the nuclear facility erection or operation period till the end of service of the facility.

2- The Insurance or financial guarantee certificate shall stipulate that it may not be rescind or suspended, except after notifying the Commission in writing and lapse of 2 months from the date of the Commission receipt of the notification with no objection, unless the Insurance or financial guarantee contract stipulates a longer period.

3- The Insurance or financial guarantee certificate shall state the value of the Insurance or the financial guarantee.

Insurance or financial guarantee provided in case of transportation of nuclear materials shall meet the following conditions:

1- The contract of the Insurance or financial guarantee shall be in effect throughout the transportation process.

2- The Insurance or financial guarantee certificate shall indicate the name and address of the responsible operator, value of the insurance or guarantee, its method of submission and effective period in addition to data on the nuclear material- subject matter of the guarantee- and an acknowledgement from the competent public authority in the state of the facility responsible for sending the nuclear materials in the name of the operator in charge.

3- The Insurance or financial guarantee certificate shall stipulate that it may not be rescind or suspended, during the transportation period of the nuclear materials.