



Government of Romania
General Secretariat of Government

National Commission for Nuclear Activities Control



SUMMARY REPORT **2014**

Contains 25 pages

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CNCAN MISSION AND PRIORITIES IN 2014

The National Commission for Nuclear Activities Control (CNCAN), as national authority in the field of regulation, licensing and control of nuclear activities, mainly aims at ensuring strict observance to the legal requirements for nuclear and radiological safety in Romania.

During 2014, CNCAN ensured a stable regulatory system, continuing to perfect the methods and practices of regulation, licensing and control in areas falling within the institution's responsibilities, in accordance with the Law no. 111/1996 on the safe deployment, regulation, licensing and control of nuclear activities, republished. In this regards, CNCAN elaborated the National Strategy for Nuclear Safety and Security, having as objective to create the general framework necessary for an uniform and coherent approach for the improvement of nuclear safety and security as well as joining the efforts of authorities and institutions with relevant tasks and responsibilities.

A major objective was to improve the work performed in the process of regulation, licensing and control of the use of ionizing radiation sources, as well as to ensure the radiological protection, given the essential requirements concerning the protection of the population, objective achieved by documenting their activities and by making the procedures for its own authorizing activity and through specialized training programs.

Another objective was on one hand, the fulfillment of obligations and commitments in its cooperation with the International Atomic Energy Agency and other international bodies and organizations in the field, and on other hand, the development of multilateral cooperation relations as well as bilateral relations with similar regulatory authorities from other states. Strengthening international cooperation in the nuclear field is another priority for maintaining the highest standards in the field of nuclear safety and security, as well as radiological protection.

Finally, during 2014 our institution continued to improve its regulatory and control performance of nuclear activities, this one being one of our strategic objectives. In this regards, in supporting the above mentioned objective, a new Regional Excellence Project, for the period 2013-2016 has been started.

Through this report, the public is informed on the most important aspects of the work carried out during 2014, providing thus an overview on the manner the mission is fulfilled.

SUMMARY OF THE ACTIVITIES CARRIED-OUT AND PERFORMANCE INDICATORS
(partially or fully achieved during 2014)

Implementation of the government policy in the field of safe development of nuclear activities

- Continuing the revision of the national regulatory framework in nuclear field in order to align with international practices
- Completing the legislative framework by issuing specific legal regulations in the competence area
- Implementing the specific processes for ensuring the compliance with international agreements, treaties and protocols to which Romania is party

Regulation, licensing and control of nuclear and radiological activities in Romania

- Ensuring compliance with the nuclear and radiological regulations and requirements (absence of accidents at nuclear facilities, of criticality events, overexposures to ionizing radiation and radioactive material releases)
- Implementation of control, supervision and inspection programs of nuclear and radiological facilities in Romania
- Implementation of authorization program for organizations, personnel and activities in nuclear field
- Implementation of surveillance, management and inventory programs for doses, material, devices and nuclear and radiological equipment

Increasing the competence level in exercising of legal powers

- Implementing the training programs for CNCAN staff
- Increasing the capability for analysis and technical assessment
- Increasing the capability to respond to radiological emergencies
- Implementing the program for ensuring the human resource within CNCAN

Strengthening international partnership

- Fulfilling the commitments assumed by Romania in the frame of international treaties and conventions in nuclear field
- Implementing the IAEA technical assistance and cooperation programmes
- Implementing the bilateral technical assistance and cooperation programmes
- Expanding the cooperation with the nuclear regulatory organizations

Informing and training of domestic and international public opinion on the use of nuclear energy for peaceful purposes in Romania

- Providing the free access to public information and the response to petitions

1. CNCAN RELEVANT ACHIEVEMENTS IN 2014

1.1. Promotion and adoption of the National Strategy for Nuclear Safety and Security

The National Strategy for Nuclear Safety and Security was approved by Governmental Decision no. 600 of 23 July 2014. The Strategy aims at providing the overall framework for addressing the uniform and consistent approach of the objective referring to the improvement of nuclear safety and security, as well as joining the efforts of authorities and institutions with relevant duties and responsibilities (<http://www.cncan.ro/assets/Informatii-Publice/Strategii-Planuri-Programe/Strategia-de-securitate-nucleara/HG-Strategie-2014.pdf>).

The fundamental objective of the strategy is relying to the continuous improvement of nuclear safety and security, respectively of protection of the occupational exposed personnel, of the population and environment from harmful effects of ionizing radiation. The monitoring of the implementation stage is annually performed by CNCAN.

1.2 Participation in the 6th Review Meeting of the Convention on Nuclear Safety

During 24 March - 4 April 2014, CNCAN representatives participated in the 6th Review Meeting of the Contracting Parties under the Convention on Nuclear Safety, held in Vienna in Austria.

During the meeting, the Romanian delegation presented the national report on the fulfillment of obligations as provided within the Convention (<http://www.cncan.ro/assets/stiri/Romanian-Report-for-the-CNS-6th-Edition.pdf>) and answered to the questions received from the representatives of the Contracting Parties to the Convention. During the Review Meeting, the following were recognized as best practices implemented by Romania:

- Development of related processes for assessing nuclear safety culture at Cernavoda NPP, both by CNCAN and by the licensee,
- Development of an integrated national strategy for nuclear safety and security.

1.3. Publication of the First National Report related to the implementation of Council Directive 2009/71/Euratom

According to the provisions of Art. 9 para. (1) of Council Directive 2009/71/EURATOM of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear facilities, on 22 July 2014 CNCAN submitted to European Commission a report related to the implementation of this Directive. The report was published on the CNCAN website (<http://www.cncan.ro/assets/Informatii-Publice/06-Rapoarte/Rapoarte-Comisia-Europeana/Raportul-national-in-baza-Directivei-200971Euratom-de-instituire-a-unui-cadru-comunitar-pentru-securitatea-nucleara-a-instalatiilor-nucleare.pdf>).

1.4. Publication of the 5th National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

Romania ratified by Law no. 105/1999 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. In 2014, CNCAN has elaborated and published the 5th National Report which is showing how Romania meets the obligations as Contracting Party to the Joint Convention. Institutions such as, ANDR, SNN / CNE Cernavoda, RATEN / ICN Pitesti, IFIN-HH, CNU have contributed to the elaboration of this report.

The report demonstrated that in Romania, nuclear spent fuel and radioactive waste are safely managed. It can be consulted at the following address: (<http://www.cncan.ro/assets/stiri/2015/RomaniaJC5thNational-Report.pdf>).

1.5. Updating the national action plan post-Fukushima

CNCAN revised and updated the national action plan post-Fukushima, in order to present the progresses performed during 2012-2014. The action plan presents the assessments performed ("stress tests") after Fukushima and the measures implemented by Cernavoda NPP and CNCAN in order to prevent the severe accidents and to improve the response in emergency situations that could be caused by extreme external events. At the end of 2014, the updated action plan was published on the CNCAN website and has been submitted to the European Commission for assessment (<http://www.cncan.ro/assets/stiri/Romanian-National-Action-Plan- post-Fukushima-Rev.1-December2014 - 23dec.pdf>).

1.6. Developing and issuing of nuclear safety norms

In 2014, the following new norms have entered into force:

- Nuclear safety norms for preparing the response to transients, accidents and emergency situations at nuclear power plants;
- Norms related to the requirements for planning and preparation of the licence holder for intervention at nuclear or radiological emergency;
- Norms related to the protection of nuclear facilities against cyber threats;

The following norms have been modified and updated in 2014:

- Norms for issuing exercising permits for operator staff, senior management staff and specific training staff within the nuclear power plants, research reactors and other nuclear facilities (updated and republished);
- Norms on authorization of quality management systems applied to construction, operation and decommissioning of nuclear facilities and Norms regarding the specific requirements for quality management systems applied to the supply activities for nuclear facilities (modified).

1.7. Starting of a new Regional Excellence Project for enhancing capabilities of the nuclear regulatory and control authority in Romania

In 2014, the activities of the new Regional Excellence Project, financed through the Norwegian Financial Mechanism for Romania for the period 2013 – 2016, have been started. The objective of the “*Regional Excellence Project on Regulatory Capacity Building in Nuclear and Radiological Safety, Emergency Preparedness and Response in Romania*“ is to improve the CNCAN capabilities in eight functional specific areas work through exchange of experience and good practices and contributing to the consolidation of its own institutional capacity with the support of the Norwegian Radiation Protection Authority (NRPA) and International Atomic Energy Agency (IAEA).

1.8 Continuous training of CNCAN staff for licensing and control using of the ionizing radiation sources

CNCAN representatives, through its specialized structures, participated in the activities organized in the frame of **PHARE project no. RO 2006/018-411.03.02 "Strengthening the technical capabilities of the Nuclear Regulatory Authority of Romania (CNCAN) in the development of radiation protection practices"** in progress from 2013, which included:

I. Workshops on elaboration of the following authorization procedures and simulating their application:

1. Authorization of the computed tomography practice with positrons emission (PET/CT);
2. Authorization of the activity for using cyclotron
3. Authorization of the radiotherapy practice with particle accelerators;

II. Training courses:

1. Training course on the evaluation and authorization of radiological facilities on computed tomography with positrons emission and of related Cyclotron

2. Training course on the evaluation and authorization of medical linear accelerators for radiotherapy

III. Technical visits to the licensees for each type of practices, that were included in the project

Also, the staff took part in the activities of the *Regional Excellence Project on Regulatory Capacity Building in Nuclear and Radiological Safety, Emergency Preparedness and Response in Romania*, which has been started in early 2014 and having as main objective to improve the regulatory and control authority capacity in all activity areas. Thus, it was ensured the participation in the training and qualification activities of the CNCAN inspectors, including also the optimization of the annual control plans. The participation in the activities related to launching the sub-project CNCAN 6 on the control of the use of ionizing radiation sources has been ensured.

1.9. Highlights of the international relations activities in 2014

CNCAN fulfilled its obligations and commitments rose from the cooperation with the International Atomic Energy Agency and other international bodies and organizations in the field.

Bilateral cooperation documents signed in 2014:

- In September 2014, CNCAN President signed in Vienna, Austria the "Memorandum of Understanding between the National Commission for Nuclear Activities Control of Romania and the President of the National Atomic Energy Agency of the Republic of Poland for cooperation and exchange of information in nuclear regulatory matters"

High-level international meetings:

- Between 24 - 25 March 2014, the third Nuclear Security Summit was held in Hague, Netherlands. The CNCAN President was a member of the Romanian delegation, headed by the State President.
- During the 24 March - 4 April 2014, the 6th Review Meeting of the Contracting Parties to the Convention on Nuclear Safety (the Convention) was held in Vienna, Austria. During this meeting, the 6th Romania's national report to the Convention has been presented. The report was drawn up by CNCAN. It includes the measures undertaken to fulfill the obligations of our country in its capacity as Contracting Party to the Convention.
- Between 12 - 13 May 2014, the CNCAN President participated in the Second Extraordinary Meeting convened in the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste.
- Between 14 - 15 May 2014, the Organizational Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste has been held. CNCAN participated with a delegation headed by the CNCAN President who acted also as deputy head of the Romanian delegation at this meeting.
- Between 22 -26 September 2014, the 58th General Conference of the IAEA has been organized. In the framework of this event, Romania reaffirmed its commitment to respect the international obligations on non-proliferation of nuclear weapons and against terrorism and support for all activities initiated under the umbrella of the Treaty of Non-Proliferation of nuclear weapons, Safeguards Agreement and the Additional Protocol, including the development of the new concept in safeguards area - State Level Concept.

2. CURRENT ACTIVITIES ON REGULATION, LICENSING AND CONTROL

2.1 Regulation, licensing and control of nuclear facilities and activities Cernavoda NPP U1 and U2

During January to December 2014, the operation of Cernavoda NPP U1 and U2 was conducted in accordance with the technical limits and conditions specified in the CNCAN licences and in other nuclear safety specific documents, without incidents of technical or other nature, which could endanger the nuclear safety of the facility, the safety of public, operating personnel or environment.

The performance indicators in nuclear safety area, in 2014, recorded values within the limits of the design project and in accordance with the nuclear safety analyses and operating documents approved by CNCAN. In 2014, the releases of radioactive effluents were below the legal limits and dose constraints set by CNCAN for both units of Cernavoda NPP (100 μ Sv/year effective dose per a member of critical group for each unit).

During 2014, Cernavoda NPP continued the activities to update the nuclear safety analyses, for both U1 and U2, in order to consider the specific conditions of both units, to meet additional CNCAN requirements, and for a continuous increase of the analysis capacity of the plant personnel, including the deterministic analysis of the nuclear safety in case of severe accidents.

CNCAN monitored the manner and conditions in which Cernavoda NPP fulfills the requirements of development or updating the deterministic and probabilistic nuclear safety analyses and assessments. The results of these analyses revealed that a small risk appeared in the plant operation which is in accordance with the limits set out by the international standards or national norms, and the risk is maintained permanently under control. The plant inspection activity was carried out, as it was planned, in order to check if the operation and the maintenance of the both units are performed in compliance with the limits and conditions included in the operating licences and the licensing support documentation.

Events reported to CNCAN

In the 2014, Cernavoda NPP reported to CNCAN, in accordance with the licensing requirements, a number of 18 events. Most events were outside the INES scale. During 2014, there were no events of Level 2, or higher on the INES scale at the Cernavoda NPP. The events mentioned above had no adverse impact on the plant workers, public or environment.

Cernavoda NPP U3 and U4

In order to relaunch the construction activities for Cernavoda NPP U3 and U4, in 2014, CNCAN has maintained the dialogue with the National Company Nuclearelectrica SA and EnergoNuclear with respect to the strategy for submission of documentation as licensing basis.

TRIGA Research Reactor

The nuclear activities performed at the Institute of Nuclear Research – Pitesti, within the State Owned Company Technologies for Nuclear Energy (RATEN) have been conducted in accordance with the licences issued by and without incidents likely to endanger the public health or environment. The TRIGA Research Reactor from the Institute of Nuclear Research – Pitesti operated in safety conditions in accordance with the limits and conditions imposed by CNCAN.

Intermediary Spent Fuel Storage Facility, Cernavoda NPP

In 2014, the licence for Nuclear Safety Operation and Maintenance of the Intermediary Spent Fuel Storage Facility (DICA) has been renewed in order to include the Module no. 6, whose construction was completed in 2014. Also in 2014, CNCAN assessed and approved the request and the support documentation submitted by Cernavoda NPP as support for the licensing of the operation of systems and components of the Spent Fuel Preparation Area (SICA) from the Unit 2. In order to issue these licences, CNCAN performed, in accordance with the license practices, dedicated inspections to the modules DICA, respectively SICA for checking the manner in which the facility complies with the licensing conditions and the description within the licensing documentation.

Facility „Experimental Pilot for Tritium and Deuterium Separation”, I.C.S.I Ramnicu-Valcea

In 2014, it was sent to CNCAN for assessment, a first set of the licensing documentation related to the modification of the Facility „Experimental Pilot for Tritium and Deuterium Separation” from the National Institute of Research and Development for Cryogenics and Isotopic Technologies, Ramnicu-Valcea. This modification is necessary for improving the process and for increasing the nuclear and radiological safety. For the licensing of the facility, the program for submission of documents requested by CNCAN was established, as well as the implementation manner of the specific requirements arising from CNCAN assessment of the documentation already submitted.

Heavy Water Detritiation Station, Cernavoda NPP

In 2014, I.C.S.I. Ramnicu Valcea submitted to CNCAN a set of documents support for licensing with the view of evaluation in the pre-licensing phase and for approval. These documents were elaborated for the Heavy Water Detritiation Station which will be sitted Cernavoda NPP.

Authorization of personnel

In 2014, CNCAN activities for the authorisation of the management staff, operationg staff and training staff for the nuclear power plants and nuclear reactors had consisted of 93 written, oral and practical examinations (to the simulator or in the facility), analysis of the training programs and procedures as submitted by the licence holders (Cernavoda NPP, ICN Pitesti and IFIN-HH Magurele). Also, CNCAN monitored the implementation of the activities resulted from the inspections of the training programs at Cernavoda NPP and TRIGA reactor in ICN Pitesti.

Mining and milling uranium ores

In 2014, for the mining and milling uranium ore activities, processing of nuclear raw material, nuclear fuel fabrication, as well as their related activities (commissioning, possession, use, handling, production, processing, supply, storage, transfer, operation, preservation and decommissioning, transport), CNCAN issued a number of 19 licences, divided by types of activities as follows: 6 licences for possession, 1 licence for preservation; 6 licences of use; 2 licences for processing , 2 licences for transport; 1 licence for supply, 1 licence for storage, 1 licence for transfer, 4 licences for handling, 4 licences for production, 1 licence for exploitation; 1 licence for preservation and 1 certificate for ending the nuclear activities and clearance from the regulatory regime. Also, in the licensing process of mining and milling activities, a number of 5 procedures whose modification or elaboration has been requested by CNCAN, have been assessed and approved.

CNCAN always pursued the enforcement of legal provisions on individual radiological monitoring of all occupationally exposed persons developing activities on mining and milling of uranium ore, processing of nuclear raw material and nuclear fuel fabrication. In accordance with the provisions of the Law no. 111/1996 on the safe deployment, regulation, authorization and control of nuclear activities, republished, during 2014 CNCAN performed a number of 13 inspections at facilities in the field of mining and milling of uranium ores, processing of nuclear raw material and nuclear fuel fabrication. Inspections were conducted with the purpose of issuing the operating licences and as unannounced inspection, during the validity period of licences issued.

Management of the Radioactive Waste and the Decommissioning of the Nuclear Facilitys

The activities carried out by CNCAN in 2014, in the areas related to the management of radioactive waste and decommissioning of nuclear facilitys included: the assessment of the documentation and extension of the validity of the licence for operation and maintenance of the Radioactive Waste Treatment Station within RATEN/ICN Pitesti; the assessment of the documentation and extension of the validity of the licence for operation and maintenance of the

Radioactive Waste Treatment Station within IFIN-HH; the assessment of the licensing documentation and issuing of the radiological safety licence for the transport package and disposal of radioactive waste from RATEN / ICN Pitesti; the assessment of the documentation and issuing the certificate of designation of radioactive waste characterization laboratory within STDR, RATEN / ICN Pitesti; the assessment of the documentation and issuing the operation and maintenance licence for Modules 1, 2, 3, 4, 5 and 6 of the Intermediary Spent Fuel Storage Facility (DICA) of Cernavoda NPP; the assessment of the preliminary plan for decommissioning of Cernavoda NPP Units U1 and U2; the assessment of the documentation and the issuing of decommissioning licence for stage 3 of the research reactor VVR-S and the decommissioning licence for stage 1 of the Nuclear Spent Fuel Repository from IFIN-HH.

Radiation protection

In 2014, further on the assessment of the requests and of the licensing documentation in the field of the management of radioactive waste and radiation protection of nuclear facilities, CNCAN issued licences, certificates, permits, approvals, acceptance certificates for carrying out activities in the controlled area of the operating undertakings, radiation passbook of the outside workers and Level 2 and 3 practice permits.

CNCAN assessed the radiation protection documentations submitted by the licensees either due to their own requests or with the view to fulfill the requirements stipulated in the CNCAN related radiological safety regulations or in the provisions of the inspection reports. Thus, during 2014 were performed: the verification and the approval of the related radiation protection procedures for Cernavoda NPP U1 and U2; the verification and the approval of the related radiation protection procedures for DICA; the assessment of licensing technical documentation for the modification of the project design for the detritiation facility at ICSI Ramnicu Valcea; the assessment of the preliminary safety documentation of the Heavy Water Detritiation Station from Cernavoda NPP; the assessment of annual report on the radioactive releases at Cernavoda NPP in order to demonstrate the compliance with the approved derived release limits and which is to be reported to the European Commission.

CNCAN has performed inspections which addressed the radiation protection aspects and the management of radioactive waste at Cernavoda NPP; IFIN-HH and RATEN / ICN Pitesti. These inspections have as objective to verify the implementation of requirements included in the regulations and licences in force. Also, in 2014, at the request of the Ministry of Environment, CNCAN assessed from nuclear safety point of view, several studies related to the environmental impact of nuclear facilities projects developed on the Bulgarian and Ukrainian territory.

Transport of radioactive materials

In 2014, further on the assessment of requests and licensing documentation in the field of transport of radioactive material, CNCAN issued licences for the transport of radioactive material, radioactive materials shipment certificates, certificates for validation of package model, approvals for training on transport issues and level 2 practice permits.

For the shipment of nuclear spent fuel from Kozloduy NPP, the technical documentation for validation of type approval certificate for the package and for the shipment on the Danube river was assessed, as well as the technical documentation related to the handling of nuclear spent fuel containers. There was also assessed the technical documentation of the maritime vessel for the transport of containers on the Black Sea.

The controls performed by CNCAN were focused on the compliance with the requirements provided in the transport modal regulations as well as on the implementation of radiation protection requirements of the personnel involved in radioactive material and spent and fresh nuclear fuel related transport activities. CNCAN has participated in the activities to prepare the shipments of the spent and fresh nuclear fuel shipment from and to Kozloduy NPP, as well as in the activities of accompanying the barge on the Danube River.

Physical protection of the nuclear facilities and materials

Through its activity, CNCAN ensured that all operators of nuclear facilities and the nuclear materials and radioactive carriers comply with the regulations and requirements set up through the legislation in force concerning the physical protection of nuclear facilities and materials and apply appropriate safety measures established by the authority. For the guard and physical protection of nuclear facilities and materials activities, in 2014, CNCAN issued a licence for Cernavoda NPP. In 2014 have been assessed and approved 14 procedures in the field of physical protection of nuclear facilities and materials, of which 8 were approved and for the rest were sent observations and comments. In August 2014, CNCAN performed a number of 8 inspections at the nuclear facilities, 4 inspections at the organizations that ensure the guard and physical protection of nuclear materials and facilities.

As the national authority, CNCAN made a strict control of the fulfillment the physical protection legal requirements related to nuclear materials, radioactive materials, nuclear and radiological facilities. Also, CNCAN has closely followed the fulfillment of its obligations assumed by Romania through the signature and ratification of the international treaties and conventions in the areas of: non-proliferation of nuclear weapons, safety operation of nuclear facilities, safety management of the radioactive waste and spent nuclear fuel, preventing and combating illicit trafficking with nuclear materials, radioactive materials and materials of nuclear interest, prevention and combating the nuclear and radiological terrorism.

The Nuclear Safeguards in Romania

In 2014, CNCAN has issued 245 licences in the field of nuclear safeguards of which 84 licences for nuclear materials and 23 licences for materials of nuclear interest (of which 6 licences for heavy water). CNCAN has also issued 132 licences for dual-use materials, equipment and devices provided in the detailed List, approved by the Government Decision no. 916/2002 and 11 negative dispositions of import/export for dual-use materials, equipment and devices.

CNCAN has continued the control of nuclear materials from the accounting material area WRMZ. CNCAN has organized two training courses for the responsible persons with the accountancy and management of the nuclear materials from the small holders of nuclear materials. A common inspection EURATOM/IAEA took place during 7-11.07.2014 on the physical inventory verification and the records of nuclear materials (PIV) in the area of accounting material WRMZ (accounting material area that includes small holders of the nuclear materials from Romania).

In order to control the organization and development of the internal transfers of nuclear materials, the CNCAN inspectors performed in field inspections related to the data notified by the licences holders for transport of the nuclear materials.

Also, CNCAN has elaborated and submitted to EURATOM and to the IAEA a number of 14 statements for the previous year (2013) as is stipulated in the Additional Protocol to the Safeguards Agreement between EURATOM, IAEA and the Member States. CNCAN has drafted and submitted a number of 5 reports for 2013 to EURATOM in accordance with the provisions of the EURATOM - Canada and Romania – Canada Agreements.

Authorization of the quality management systems of the equipment and services supplier for the nuclear facilities

The authorization of the quality management systems is a previous condition for issuing by CNCAN of the nuclear and radiological safety licences . In 2014, CNCAN issued licences for the quality management systems in the nuclear field for: INC-DTCI-ICSI Ramnicu Valcea, for management the activities of tritium removal; S.C. EnergoNuclear S.A. for management the activities associated with the pre-design phase for Units 3 and 4 of the Cernavoda NPP; INC-DTCI-ICSI Ramnicu Valcea for the manufacturing and services activities class 3 gradually implementing the quality management system requirements; CNU S.A. Bucharest – Feldioara Subsidiary for manufacturing activities class 3 for the sintered uranium dioxide powder and uranium U₃O₈, intermediate preserved in the manufacturing process of the sintered uranium dioxide powder.

During 2014, CNCAN issued 67 licences for the quality management system. In the same time were audited, in order to be licenced, 9 companies from abroad. These companies are products

and services suppliers for nuclear facilities. The periodic updated situation of the companies having a licenced quality management system for the development of nuclear activities in Romania is available on the CNCAN website (<http://www.cncan.ro/informatii-de-interes-public/unitati-autorizate-de-cncan/>).

CNCAN has performed the control at the products and services suppliers through the assessment and approval of the quality plan for products and services having quality class. During 2014 were approved, after the assessment, a number of quality plans for 125 products and services for nuclear facilities.

Preparedness, planning and intervention in case of nuclear accident or radiological emergency

The CNCAN Emergency Response Centre was operational during 2014. In case of nuclear or radiological incident/accident, the Emergency Response Centre acts as a technical support operational center where the emergency response team of CNCAN takes actions. In normal situations, within the CNCAN Emergency Response Centre operates the National Contact Point. In this Center are received and/or transmitted national and international notifications. The National Contact Point during 2014 had a permanent regime, 24 hours/day. In 2014, the CNCAN Emergency Response Centre, through the dedicated emergency fax, received 188 messages and 140 messages were sent. CNCAN aims to develop and maintain its capabilities for intervention in the event of nuclear accident or radiological emergency through professional training and advanced technical equipment, as well as through the coordination - integration in specific activities at the national and international scale. In order to develop and maintain the capabilities to the emergency response, CNCAN has organized in 2014 training courses and workshops and it has participated in exercises designed to test the response capabilities to response in emergency situations.

2.2 Regulation, authorization and control the use of ionizing radiation sources

Currently, a number of 7204 economic agents from Romania and 102 economic agents registered abroad develop activities in nuclear field managed by CNCAN.

During 2014 there was registered a total of 9996 requests. In the documentation assessment process were sent to the applicants, 3117 addresses requesting completions necessary for issuing the licences or practice permits. In 2014 were elaborated 1715 addresses answering to the general information requests, 764 addresses for scheduling the applicants to the examination for obtaining the practice permits and 206 rejection addresses for the documentation that did not meet the requirements stipulated in the specific legislation.

During 2014 CNCAN has issued a total of 2589 licences as follows: 6 siting licences; 182 siting and construction licences; 113 type approval (ASR) licences; 5 construction licences; 309 possessing licences, 4 decommissioning licenses; 2 shipment licenses; 33 export licenses; 37 supply

licenses; 130 supply licenses without type approval (ASR); 56 import licences; 83 leasing licences; 295 registration licences; 64 handling licences; 3 production licences; 4 commissioning licences; 69 shipment licences; 80 transfer licences; 28 transport licences; 728 use licences. In 2014 also were issued 109 notices for including of the occupational exposed workers workplaces in special conditions in accordance with the provisions of Governmental Decision No. 1077/2013.

In 2014 were organized 31 examination sessions of which, 6 were held at the applicants headquarters. Based on these examinations were issued 1098 practice permits Level 1, 2 and 3. There were issued 325 extensions of practice permits and were issued 6 duplicate practice permits.

This year, 106 initial/continues training programmes, in the field of radiation protection and radiological safety, were approved by CNCAN. During 2014 have been organized 50 training courses for Level 1 and 56 for Level 2.

In 2014, there were registered and evaluated 140 applications together with their radiation safety technical documentation and were issued 137 agreements for the development of the non-destructive control activities with ionizing radiation performed outside the area of licensed irradiation vessel.

CNCAN has organized the centralized doses records for occupationally exposed workers by initiating the National Registry of Doses. In this registry are included the individual monitoring results that have been submitted by the licence holders and by the accredited dosimetry bodies, as follows:

- 2012 – 25 333 workers were surveyed from dosimetry point of view with a collective dose of 16 326.81, person mSv; the average dose for all the surveilled workers was 0.64 mSv and for the doses above the minimum detection dose the average dose was 0.89 mSv.
- 2013 – 22 303 workers were surveyed from dosimetry point of view with a collective dose of 17 161.73, person·mSv; the average dose for all the surveilled workers was 0.77 mSv and for the doses above the minimum detection dose the average dose was 1.13 mSv.
- 2014 – 24 221 workers were surveyed from dosimetry point of view with a collective dose of 14 476.55, person·mSv; the average dose for all surveyed workers was 0.96 mSv and for the doses above the minimum detection dose the average dose was 0.60 mSv.

The occupational exposed workers are surveyed by accredited dosimetry bodies. Based on the information received from them it was made an assumption of the number of occupational exposed workers and of the collective dose.

The doses received by the occupational exposed workers to the ionizing radiation were within the limits stipulated by the international norms; the recorded and reported exceptions were a very small number each of them being analyzed.

Generally speaking, the incidents were not major and appeared mainly due to the non-

compliance with the radiation protection regulations.

During 2014, the experts within the Division for the Licensing the Use of Ionizing Radiation (DAURI) attended the following events:

- Scientific visit on **Nuclear Medicine – PET Systems** at King’s College London – School of Medicine Division of Imaging Sciences and Biomedical Engineering during 17-21 March 2014.
- Technical Meeting on the **Implementation of the IAEA recommendations and guidelines on nuclear security of the international and domestic transport of nuclear materials and other radioactive materials** organized by the IAEA, during 9-14 June 2014.
- Regional Training Course on **Assessment of Occupational Exposure due to External Sources of Radiation** held in Cracow, Poland, during 22 – 26 September 2014.
- **Open – Ended Meeting of Legal and Technical Experts to Develop Internationally Harmonized Guidance for Implementing the Recommendations of the Code of Conduct on the Safety and Security of Radioactive Sources in Relation to the Long Term Management of Disused Radioactive Sources**, organized by the IAEA during 19 – 24 October 2014.
- The meeting on **Competence for Human Resources for Regulatory Body**, organized by the IAEA, during 18 – 21 November 2014.

2.3 Control activity for applications of using the ionizing radiation sources

During 2014, were planned 1200 inspections and were performed 1100 inspections, representing 90% loaded rate. It is noted that comparing with the last year, the number of inspections was decreased (with about 200) as a result of takeover some tasks within DAURI Division and due to the fact that the number of inspectors is reduced with 3 positions. Basically, for the inspection process we have 12 positions. It is noted that the average number of inspection/inspector per year is 120 for planned inspections and 110 for performed inspections.

During 2014 were applied 35 sanctions, as follows:

- 23 notices
- 12 infringement (about 21100 Lei).

OTHER ACTIVITIES

- Recording in the CNCAN’s registry of the scrap metals operators
 - 30 scrap metals operators were inspected
 - 21 registration sheets for scrap metals operators were issued
- The inspectors from BUCUREȘTI – ILFOV county took, from DAURI, 960 documents for evaluation in order to issue licences and 250 licences were issued due to their evaluation.

- The CNCAN specialized staff participated in Phare Project that had as results to issue some guides necessary for elaboration the licensing and inspection specific instructions for the following practices:

- nuclear medicine
- radiotherapy

Following this project results the CNCAN staff started the elaboration of the specific working procedures for the above mentioned practices.

- The interventions in case of a radiological emergency coordination activities included 25 activities of which:

- 20 joint interventions together with the Inspectorate for Emergency Situations (ISU) which included the finding and putting in safety conditions of orphan sources or radioactive contaminated materials with naturally occurring radionuclides artificially concentrated by various processes.
- 5 interventions exercises

- 4 regulatory inspections have been performed in the following areas:

- handling scrap metals
- handling - Naturally Occurring Radioactive Materials (NORM)

- 5 responses to complains were issued.

2.4 International Affairs

During 2014, the international affairs activities were focused on the development of the multilateral cooperation relations, as well as on bilaterall cooperation relations with nuclear regulatory authorities from other states. Strenghtening the international cooperation in nuclear field represents an essential objective for maintaing the highest level of standards for nuclear safety and security, as well as for radiation protection.

In the framework of the International Atomic Energy Agency (IAEA) cooperation, within the national cooperation project ROM/9/032 „Strengthening Regulatory Capabilities to Respond to New Challenges in Nuclear Field and to achieve a High Level of Expertise” developed between 2014-2015, CNCAN organised on 3-7 February 2014, the national traning course „Techniques in the assessment of radiological consequences during radiation emergencies or nuclear accidents” and implemented a part of the activities included in the project workplan.

CNCAN in cooperation with IAEA, in the framework of the regional project RER/9/10 „Strenghtening the Inspection Capabilities and Programmes of the Regulatory Authorities”, also organised in 2014 two activities:

- The regional workshop on „Analyse Pros and Cons of Adopting Human Organizational Factors and Integrated Management System Programmes” was held in Bucharest on 2-6 June 2014. The workshop was attended, besides by CNCAN and IAEA representatives, by experts from 22 countries as well as representatives of the national institutions in nuclear field.
- The regional training course on „Regulatory Oversight of Licensees’ Human and Organizational Factors and Integrated Management Programmes” was held in Bucharest on 15-19 December 2014. The training course was addressed to 40 experts including 22 foreign participants from 15 countries, IAEA experts and lecturers, as well as CNCAN experts and representatives of the institutions in Romanian nuclear field.

Also, CNCAN continues the cooperation activities with the Department of Nuclear Safety and Security within IAEA. The cooperation consisted in organization of the national and regional activities in order to strengthen the global concept of nuclear security culture in Romania. Thus were organised:

- National workshop on „Nuclear Security Culture” held in Bucharest on 4-6 March 2014. The workshop was addressed to the CNCAN experts, as well as to the representatives from the invited national authorities, having responsibilities in the strategy for promoting the nuclear security culture.
- Advanced National training courses on „Cyber Security for Nuclear Facilities” held in Bucharest on 21-25 July 2014. The training course was attended by 35 specialized experts, IAEA lecturers, CNCAN staff, as well as representatives from the nuclear power plant and other nuclear facilities, involved in the regulation activities relevant for cyber security or in the issuing of the regulations in the field of cyber security.

CNCAN was involved in the European Commission and the Council of the European Union working groups for the elaboration and review of the communautaire aquis.

During 2014, has been initiated the necessary procedures for the transposition of the *Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionizing radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom* and CNCAN organised a series of interinstitutional meetings on this topic, given the fact that the transposition of this Directive lead to the modification and completion of some normative acts, both in CNCAN field of competences and other national authorities.

International representations

The 3rd Nuclear Security Summit was held in The Hague, the Netherlands on 24 – 25 March 2014, the CNCAN president being member of the Romanian delegation headed by Romanian President.

The summit agenda covers: removed the high enriched uranium (HEU) stocks from the national territories, drawing attention of the international community to the importance of minimization the HEU stocks in order to completely remove them until the 4th Nuclear Security Summit that will be held in 2016, improving the security of radioactive materials and sources, secure sensitive nuclear information, strengthening the security of nuclear information, improving the prevention and detection methods in the field of nuclear forensics.

The participating countries reaffirmed their desire to strengthen the nuclear security, the reduction and prevention of nuclear terrorism threats, non-proliferation of nuclear weapons, the commitment on nuclear disarmament, highlighting the connection between nuclear safety and security, the role and direct responsibility of nuclear industry in ensuring the nuclear safety, the importance of the information security and cyber security, the importance of the efforts related to the safety transport of nuclear and radioactive materials, the importance of the efforts related to combating the illicit trafficking of nuclear material, highlighting the role on combatting the nuclear forensics.

Between 24 March – 4 April 2014 in Vienna, was held the 4th Review Meeting of the Contracting Parties to the Convention on Nuclear Safety. During the meeting it was presented the 6th Romanian National Report under the Convention on Nuclear Safety, issued by CNCAN.

Between 12-13 May 2014, the CNCAN president participated to the 2nd Extraordinary Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

Between 14-15 May 2014, took place the Organizational Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. CNCAN was represented by CNCAN President, as deputy of the head of the Romanian delegation to the meeting.

The 58th Annual Regular Session of the IAEA General Conference was held on 22-26 September 2014 in Vienna, Austria. During this conference, Romania reiterate its engagement to accomplish the international commitments assumed in the field of non-proliferation of nuclear weapons and against nuclear terrorism, as well as continuation to support all the activities developed under the Treaty on the Non-Proliferation of Nuclear Weapons, Safeguards Agreement and Additional Protocol, including the development of the new concept in the field of nuclear safeguards, *State Level Concept*.

The CNCAN president signed on September 2014, in Vienna, Austria, the „Memorandum of Understanding between the National Commission for Nuclear Activities Control and the President of the National Atomic Energy Agency of the Republic of Poland for Cooperation and Exchange of Information in Nuclear Regulatory Matters”.

The memorandum represents the legal base for exchange of information between the two authorities related to: regulatory issues for the new nuclear designs power plants, siting, construction, commissioning, operation and decommissioning of nuclear facilities, legislative framework, regulations, licences, regulatory codes, standards, criteria and guides, including procedures specific for the regulatory activities, periodic regulatory activities and practices, as well as radiation protection.

2.5 Public Relations

During 2014, the National Commission for Nuclear Activities Control continues to be concerned on providing accurate and timely information to the public on the safe deployment of nuclear activities on the Romanian territory. Thus, it has been assured the legal framework necessary for the development of the activities arising from the Law no. 544/2001 on the free access to the information on public interest and from the Government Ordinance No. 27/2002 related to the regulation of the activity to solve the petitions, modified and supplemented by the Law No. 233/2002, Government Decision no. 1723/2004 pertaining to the approval of the program of measures for combating the bureaucracy in the activity of public relations.

During 2014, CNCAN received from the public and media, 85 requests for information as follows:

- 11 petitions;
- 18 requests for public information;
- 12 requests for information coming from media representatives.

At the two public e-mail addresses office@cncan.ro and relatii publice@cncan.ro were received around 9000 messages, as follows:

- 100 emails from the romanian and foreign citizens interested in the consistency of nuclear activities with the legal provisions;
- 10 requests for audiences;
- 5 thanks letters;
- 50 congratulations letters addressed on different events.

Within the National Commission for Nuclear Activities Control, during 2014, the public information was done according to the provisions of Law no. 544/2001 on the free access to the information on public interest and was performed properly by:

- Publishing the CNCAN's Annual Report 2013 on the institution's website www.cncan.ro.
- Publishing the CNCAN's Summary Report 2013 on the institution's website www.cncan.ro and publishing it in the Official Journal of Romania no. 433/ 30.07.2014 Part III.

2.6 Management Resources

During 2014, the Management Resources Section (SMR) timely and correctly accomplished its duties, according to the Government Decision No. 1627/23.12.2003 for the approval of the CNCAN Organisation and Functioning Regulation, with subsequent modifications and completions.

SMR comprises the following departments:

- a) The Finance and Accounting Department
- b) The Public Acquisition and Administrative Department
- c) The Human Resources Department.

The SMR economic activity

The most significant activities carried out by SMR in 2014 were:

- Further to the approval of the Law on the State Budget for 2014, SMR took all the necessary measures to ensure the budget execution in accordance with the legal provisions in force and in accordance with the limits for expenditure.
- Elaboration and submission the requests to Government General Secretary for opening the credits, for quarterly and annual balance sheets, monthly reports on the monitoring of the employee expenses and other monthly reports according to the Order No. 2941/2009 and Order No. 1202/2008.
- Elaboration and monthly submission of the statements on the nominal records of insured employees and of the contributions to the State Budget, Social Health Care Insurance Budget, the Unemployment Insurance Budget, the State Social Insurance Budget, Social Insurance Budget and Special Funds.
- Monthly reports on salaries expenses to the National Institute of Statistics.
- Direct acquisitions for carrying out the current activity were made in the amount of 795 000 lei, of which SEAP 723 225 lei.
- Several contracts were concluded for the supply of the following services: internet connection, mobile telecommunication, offices cleaning and maintenance, accounting software and legislation upgrade, office equipment maintenance, Management of the Labour Health and Safety (SSM) and emergency situation services (PSI), elevator maintenance, air conditioning service, maintenance/ repair for alarm and burglar systems. During 2014 continues the framework agreement with 6 economic agents for the casual air transport services.

- Another activity was supplying logistic support for workshops, symposia and other national or international events, by purchasing reference material, equipment and appropriate services.
- As regards the administrative duties, were made all the necessary arrangements for repair and modernisation of all three offices where CNCAN personnel performs their activities.

Special attention was devoted to the effective operation of the vehicles. Appropriate procedures were applied and related contracts were concluded for the maintenance of vehicles and for ensuring the compliance with the legal provisions of circulation on the public roads.

CNCAN's contribution to the state budget

During 2014, CNCAN transferred a total amount of **20 840 540 lei** to the state budget (the equivalent of collected fees)

CNCAN's expenditure

CNCAN's expenditures in 2014 are listed below, according to major expenditure headings:

-Lei -

Indicator	Budget for 2014	Paid out	Execution
TOTAL Public Authorities and External Actions	9 643 000	8 387 070	87%
Total employee expenses, of which:	4 100 000	3 950 895	96%
- Salary expenses	3 188 000	3 102 874	
- Contributions	912 000	848 021	
Goods and services	2 268 000	1 636 470	72%
Other transfers (comprising the Phare programmes and other grant programmes, the fees and contributions to international organisations)	2 860 000	2 571 651	90%
Non-financial assets (investments)	385 000	228 354	60%

In 2014, have been started the activities within „The Regional Excellence Programme on Regulatory Capacity Building in Nuclear and Radiological Safety, and Emergency Preparedness and Response in Romania”, financed by the Norwegian Financial Mechanism 2009-2014. The project beneficiary is CNCAN together with the project partners Norwegian Radiation Protection

Authority (NRPA) and the International Atomic Energy Agency (IAEA) -Viena. Within the project, SMR was supplying logistic support for the workshops and meetings organized by CNCAN.

Human resources – 2014

The CNCAN Human Resources ensures the achieving of the determination activities based on performance criteria, staff management policy, ensures the appropriate conditions for monitoring the staff policies, to promote and attitude change in order to enhance the staff professionalism and performance.

The human resources policy promoted by our institution aims to maintain, recruit and bring into the system of the high qualified personnel, further improving their professional skills and develop their capability, in order to review, analyse, and perform expertise and control activities in the nuclear field.

The development of human resources requires constant personnel training, in order to provide proper understanding of the organisational needs, focused especially on the strengthening the human resource in order to achieved the requirements of the european structures imposed to Romania, on all activities performed in the nuclear field.

CNCAN ensures the personnel training through courses and specialisation stages, both in the country and abroad. So, during 2014, 29 employees attended 17 training courses and workshops, organized in Bucharest and in the country.

During 2014, CNCAN organised 4 competition sessions for filling the vacancies, finalized with 4 employments (2 public functions and 2 contractual functions).

As regard the personnel fluctuation within CNCAN, in 2014 was a total of 3 terminations of employment. Due to these modifications, at the end of 2014, from an amount of 88 posts, remains 3 vacancies.

Within the same period, CNCAN promoted a number of 8 employees (6 promotions – in degrees and 2 promotions – in functions).

Distribution of CNCAN personnel by levels of education, in 2014:

- | | |
|-------------------------------|----------------|
| - Long-term higher education | - 81 employees |
| - Short-term higher education | - 1 employee |
| - Secondary education | - 3 employees |

Analysing the above mentioned data, related to the level of education, resulted that share is represented by the well-trained staff, having long-term education (engineers, physicists, lawyers, economists), in generally high qualified staff.

Management of the Labour Health and Safety (SSM)

Within CNCAN, the SSM aim was to establish and to implement the measures related to the promotion the enhancement of labour health and safety for the employees, based on the employer's obligation to ensure the health and safety of employees in all the work aspects.

According with the legislation in force, CNCAN has a permanently concern for compliance with the prevention and protection plan, that includes technical, healthy and organizational measures, based on risk assessment and its application to the specific jobs in nuclear field. In this respect, continues the contract with an authorised company specialized on prevention and protection services in the field of SSM and PSI.

Another major concern of our instiotution, was focused on the employees protection with respect to monitoring their health, as well as the continuous improvement of the working conditons.

In this respect, CNCAN together with the representatives of Health and Safety Committee, was involved in implementation of the labour medicine contract, carrying out medical tests for staff, according to the legislation in force.

2.7 Legal activities

The institution interests have been represented in 12 cases pending before courts on infringement complaints, civil claims, debt recovery, labor disputes.

The institution interests have been represented in 6 cases under judicial execution phase, covering claims - financial rights.

Within the Legal Department were settled 215 documents (legal opinions, views , judicial acts).

Have been analysed 8 proposals of projects for normative acts and have been made proposal for legal approval according to the Regulation for procedures, applicable at governmental level, for elaboration, approval and presentation of draft public policy documents, draft projects of normative acts, as well as other documents for adoption and approval.

The institution management and the interested departments, have been informed related to the normative acts relevat for the institution organisation and activity – 13 notifications for 75 normative acts.

Have been reviewed, signed and countersigned the CNCAN's president decisionsa number of 275 documents (orders and decisions).