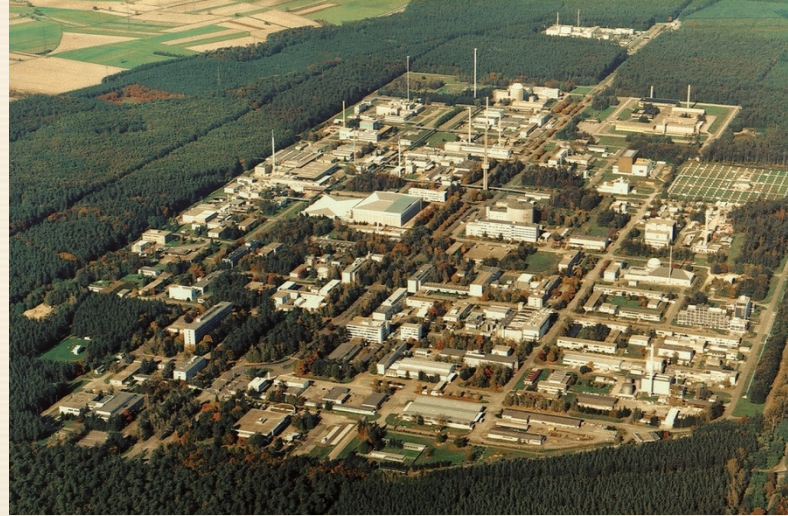


National Report: ROMANIA



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R²D²P: Workshop on “Decommissioning Technologies”
Karlsruhe Research Centre, Germany; 06-10 July 2009



IAEA

International Atomic Energy Agency

Independent regulatory body

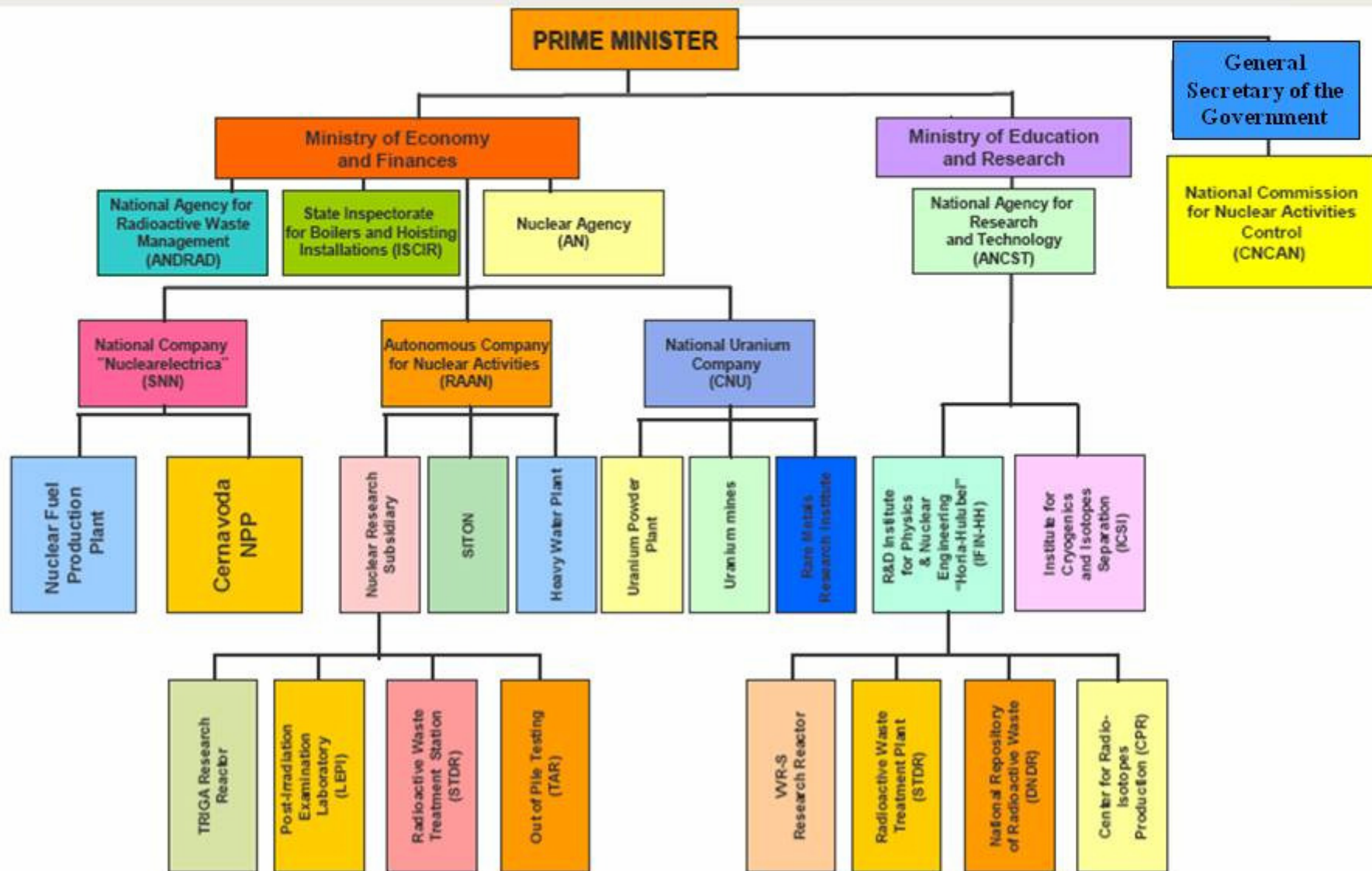
National Commission for Nuclear Activities Control – CNCAN, has the empowerment to offer regulation, authorization and control for nuclear activities in Romania.

CNCAN was established on January 8, 1990 through reorganization of a former regulatory body.

CNCAN is coordinated by Prime Minister's Cabinet.



Independent regulatory body



Legal and regulatory framework

‘Decommissioning’ is included in the national legal and regulatory framework.

Legal framework

- **Law No. 111/1996, republished**, on safe deployment of nuclear activities, regulation, authorization and control of nuclear activities, states:
 - The license holder has the obligation to elaborate a program for decommissioning preparation that should be sent for approval to CNCAN.

Legal and regulatory framework (cont.)

- The license holder has the obligation to prove that has enough material and financial resources to sustain the decommissioning activity, when will end operational activities, to receive the license for deployment of a nuclear activity.
- Decommissioning is a licensed stage of the nuclear facilities. Decommissioning activity of nuclear installations without license is subject of prison punishment.
- It is mandatory the authorization of the Quality Assurance System for decommissioning.

Legal and regulatory framework (cont.)

- **Law nr. 105/June 16, 1999**, that ratified the “Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management”. It is important that Joint Convention provides that decommissioning plans for a radioactive waste management facility are prepared and updated, as necessary, using information obtained during the operating lifetime of that facility, and are reviewed by the regulatory body. A nuclear facility in the process of being decommissioned could be considered a radioactive waste management facility (only if it is so designated by Contracting Party; not yet in Romania).



Legal and regulatory framework (cont.)

- **The GO 11/2003** with subsequent modifications and completions (GO No. 31/2006, law No. 26/2007) on the safety management of the radioactive waste. The law establishes the responsibilities of the nuclear license holders and of the National Agency for Radioactive Waste – ANDRAD in the management of the radioactive waste area, inclusive decommissioning activities, such as:
 - The license holder responds for preparation of decommissioning documentation (decommissioning plan (DP) and supporting documents) and for decommissioning activity (this is the case for RR).

Legal and regulatory framework (cont.)

- License holder elaborates feasibility studies for financing the decommissioning activity of the RRs from state budget.
- License holder responds for the management of radioactive waste from decommissioning.
- ANDRAD coordinates the decommissioning process; one action is to endorse the decommissioning plan prior to be approved by CNCAN.
- ANDRAD could respond for decommissioning activity in case of bankruptcy (undesired situation for commercial activities) or at the end of activity (case of NPPs where a decommissioning fund is managed by ANDRAD).

Legal and regulatory framework (cont.)

- **Law No. 57/2006** on peaceful utilization of nuclear energy provides that the decommissioning of research reactors is approved by Government Decision (GD).

Regulatory framework

- **NSN-15** - “Norms on Decommissioning of Nuclear Installations” approved by Order No. 1815.09.2002 of the CNCAN (regulatory body) President, published in the Official Bulletin No. 867/2.12.2002, in force from January 1st, 2003, are applicable for decommissioning of the following nuclear installations:



Legal and regulatory framework (cont.)

- Research reactors;**
- Subcritical assemblies;
- Radioactive waste treatment plants;
- Interim storage of spent nuclear fuels;
- Interim storage of radioactive waste.

The NSN-15 norms:

- establish the documents, requirements and steps necessary for licensing for decommissioning of nuclear installations with the purpose of release them from licensing regime.

Legal and regulatory framework (cont.)

- specify the obligation for license holders to have DP for new nuclear installations at the first licensing.
- CNCAN reviews and approves DP in maximum 60 days from receiving (DP is requested with other supporting documents: Final Safety Report, Radiation Protection Program, Quality Assurance Manual etc.)
- A report of activity must be sent to CNCAN on the period of implementation of decommissioning (quarterly and annually).

This norm requires revision to implement other provisions in accordance with IAEA WS-R-5.



Legal and regulatory framework (cont.)

- **NDR-01**, “Fundamentals norms for safety management of the radioactive wastes” elaborated by CNCAN with the Order no. 56/March 25, 2004. The norms represent the adaptation of the IAEA SS No. 111-F: “The principles of radioactive waste management”

- **NDR-02**, “Norms for Free Release of Materials Resulting from Authorized Practices” that establish the clearance levels for materials. For the future decommissioning activities of nuclear facilities there are requested specifically norms for materials, buildings and soil. CNCAN plans to issue specific norms.



License / authorisation

- RRs have a license for conservation for the period from final shut-down to the beginning of decommissioning activity.
- RRs have a license for decommissioning (valid five years) to begin legally the decommissioning process.
- If for any reason the decommissioning process is stopped, the license holder requires a license for possession (valid five years). A new decommissioning process will start with a new radiological characterization, a new approved DP and a new license for decommissioning.

All licenses are issued by regulatory body, CNCAN.



Decommissioning planning / implementation

- In 2005 was elaborated by the Institute for Nuclear Research the first conceptual decommissioning plan for TRIGA nuclear research reactor that was approved by CNCAN with observations in September 11, 2005. The observations must be accomplished at next revision in 2010.
- In 2008 was endorsed by ANDRAD and approved by CNCAN the revision 9 of the final plan for decommissioning of the VVR-S nuclear research reactor from IFIN-HH. The decommissioning process is envisaged to last 11 years as is indicated in the last feasibility study.

Decommissioning cost calculation / funding

- For TRIGA reactor was not carried out a decommissioning cost calculation. This aspect is a requirement for the next revision of DP in accordance with CNCAN's observations.
- For VVR-S nuclear research reactor the last feasibility study approved this year provides the new cost of decommissioning: 34 334 796 EURO (includes the upgrading of radioactive waste management facility (7 405 070 EURO), management of radioactive waste and disposal of radioactive waste)
- The funding of decommissioning is from State budget as an investment project.



Progress and Achievements

- Aspects of decommissioning successfully addressed to date:
 - A final decommissioning plan endorsed by ANDRAD and approved by CNCAN for VVR-S.
 - A cost calculation for implementation of decommissioning of VVR-S reactor.
 - The repatriation of HEU spent fuel from VVR-S under the RRRFR project.
- Aspects of this work to share with others to help them addressing similar problems:
 - The preparatory decommissioning work.



Issues / Challenges

The next decommissioning plan of TRIGA nuclear research reactor should implement:

- A cost estimation of decommissioning activity and management of radioactive waste.
- New technologies for decontamination and new technical aspects for dismantling to minimize the radioactive waste and proper technologies for the management of radioactive waste.