



6th Review Meeting of the Convention on Nuclear Safety

Country Group 3

Presentation by Portugal

March 25th 2014

Presentation Outline

- *The National Program under CNS*
- *The Changes in Legislation*
- *The Creation of a Regulatory Body*
- *Problems to be resolved in the near future*

Summary of basic information on the national program

- There are no NPP's in Portugal and there are no plans to even discuss the possibility of building one;
- Since 1961 there is a single Research Reactor, the Portuguese Research Reactor (RPI), which is a 1 Mw swimming pool type reactor;
- Exploration for uranium was terminated in 2000;
- The RPI was previously converted from HEU to LEU in 2006 to improve proliferation resistance. All HEU has been returned to the United States and there is no storage of fuel or waste at the facility;

Summary of basic information on the national program

- Public sentiment against NPP's continues to be strong;
- Portugal became a Contracting Party of CNS in August 1998 and has submitted national reports since then;
- The Portuguese nuclear regulatory body was created in 2012 under Decree-Law 30/2012 of February 9th.

Changes in the national program since the last Review Meeting

- Under Decree-Law 29/2012 of February 9th the State Laboratory “Instituto Tecnológico Nuclear” (ITN) became part of the “Instituto Superior Técnico” (IST), the Engineering School of the University of Lisbon, which is now the new operator of the RPI;
- Under Decree-Law 30/2012 of February 9th ,which transposes the Directive 2009/71/EURATOM, the “Comissão Reguladora para a Segurança das Instalações Nucleares (COMRSIN) was created as a nuclear regulatory body responsible for overlooking the safety of nuclear installations;

Changes in the national program since the last Review Meeting

- Decree-Law 262/2012 of December 17th proposed by COMRSIN sets up the obligations that license holders for the operation of nuclear installations have to comply to continuously improve their safety under the supervision of the regulatory authority;
- A number of previous Decree-Laws were fully or partially revoked (see National Report), in order to streamline the national legislation;
- With these recent developments Portugal became in full compliance with the EU Directive 2009/71/EURATOM of June 25th;

Significant events since the last Review Meeting

- There were no significant events worth reporting;
- The RPI runs often below maximum power and has experienced no significant operational problems.

Action on Challenges and Planned Measures from the last Review Meeting

- The biggest issue addressed to Portugal in the 5th Review Meeting was the lack of a regulatory body overlooking the safety of nuclear installations, namely the RPI;
- As mentioned above this issue is now solved from the legal view point and COMRSIN is being established as a regulatory body responsible for supervising the safety of nuclear installations, as well as the safety of radioactive waste and spent fuel according to the new Decree-Law 156/2013 of November 5th;

Action on Challenges and Planned Measures from the last Review Meeting

- With the above mentioned Decree-Law Portugal has transposed EU directive 2011/70/EURATOM of July 19th;
- From the legal point of view Portugal has a regulatory structure in line with both the Convention on Nuclear Safety and the Joint Convention;
- Until now there were no Peer Review Missions to report under the voluntary system of IAEA and under the provisions of the Euratom Directives.

Actions taken in the light of the Fukushima Daiichi accident

- The RPI was constructed taking into account the historical seismicity of the region of Lisbon.
- In the 2007 update of the safety studies of the RPI, an earthquake was taken as an initiating event for a Beyond Design Basis Accident.
- As the power of the RPI is only 1 Mw, there is no fuel damage even in the case of a complete loss of water from the pool, regardless of the status of the power supplies.

Actions taken in the light of the Fukushima Daiichi accident

- These safety studies were approved by the licensing authority for nuclear installations after a reasoned opinion from an external expert indicated by the IAEA.
- Following the Fukushima accident, the operator has updated the information available on tsunami events.
- Recent literature shows that tsunami waves following the 1755 earthquake are less than 1m high in the Tagus river at a point close to the RPI.

Actions taken in the light of the Fukushima Daiichi accident

- As the reactor is located 30m above the sea level, this is not a significant issue for the safety of the installation.
- Thus it is possible to conclude that additional measures to adjust the conditions of the installations in case of earthquake followed by tsunami will not be required.

Planned Measures to Improve safety

- The RPI is expected to run until 2016 on LEU; then all fuel and waste will be returned to the USA until 2019.
- According to Decree-Law 262/2012 of December 17th the operator (IST) was given one year to conform with the new legislation that sets the obligations license holders have to comply to continuously improve the safety of nuclear installations.
- IST has submitted in December 2013 a new version of the Safety Analyses Report within the scope of Decree-Law 262/2012 which is currently being evaluated by COMRSIN.

Planned Measures to Improve safety

- The timing and the strategy for decommissioning the RPI are not defined yet.
- The Government is committed by law (Decree-Law 29/2012) to support all costs regarding fresh fuel, spent fuel and decommissioning of the facility.
- Portugal is making use of IAEA support opportunities and is committed to resolve all remaining structural issues.

Current and future Challenges

- Although Portugal has now a nuclear regulatory body (COMRSIN) written into the national law (there is no going back to the old days), much needs to be done to make it sustainable.
- Much of the expertise in nuclear science and technology in Portugal reside at the Sacavém campus of IST where the RPI is located.
- Therefore staffing the regulatory body with minimal human resources that are competent, independent from the nuclear operator, and not so old in terms of age is a difficult matter.

Current and future Challenges

- IST may become one of the Technical Support Organizations (TSO) for the regulator, although it cannot be so on all matters due to conflict of interest.
- Due to the financial crises in Portugal and the scrutiny of the TROIKA, COMRSIN has yet to be given the necessary human, financial, technical and administrative means that are needed to make COMRSIN a truly independent body, free from outside interference.

Current and future Challenges

- During 2014, and in accordance with Article 52º, paragraph 7 of Decree-Law 156/2013 of November 5th (new spent fuel and radioactive waste law), the Government is committed to restructure the regulatory body within 120 days from publication of that same Decree-Law.

Good Practices and Efforts

- The best “good practice and effort” we have undertaken since the last CNS review meeting has been the transposition into the national law of Euratom Directives 2009/71 and 2011/70, leading to the creation of a regulatory body that is responsible for overlooking the safety of nuclear installations, spent fuel and radioactive waste.

Questions Raised from Peer Review of National Report

- There has been no Peer Review of the National Report.
- Portugal may request a Peer-Review of its regulatory framework within two years time.
- During the questions and answers period of the present review meeting five countries posed 13 questions we tried to answer in a very straightforward manner.
- All five countries asked questions about human resources, technical expertise and independence of your regulatory body.
- We are fully aware that this is THE Achilles heel in our national program.

Updates to National Report to 6th Review Meeting

- With the publication of Decree-Law 156/2013 of November 5th, COMRSIN became also responsible for regulating and supervising the safety of radioactive waste and spent fuel in line with the requirements of the Joint Convention.

Conclusions

- In the past two years the Government of Portugal was able to bridge a very important gap in our compliance with both the Convention on Nuclear Safety and the Joint Convention, by setting up the legal framework for a regulatory body that overlooks the safety of nuclear installations, spent fuel and radioactive waste.
- But “man does not live of legal matters alone”!!!!
- Much remains to be done to give independence and substance to our regulatory body in line with IAEA requirements and EU regulations.



**Thank you for your
consideration!**



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