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Closing Brief

**ARTEMIS Peer Review
Mission to France**

Paris, France

January 14-24, 2018

Agenda

- Team Introduction
- Review Scope
- Review Process
- Results
 - Recommendations
 - Suggestions
 - Good Practices
- Summary and Other Observations



Team Introduction

ARTEMIS REVIEW TEAM

Mr. Peter DE PRETER	Team Leader (Belgium)
Mr. Kai MÖLLER	Deputy Team Leader (Germany)
Mr. Kai HÄMÄLÄINEN	Reviewer (Finland)
Mr. Luis JOVA SED	Reviewer (Cuba)
Mr. István LÁZÁR	Reviewer (Hungary)
Mr. Paul McCLELLAND	Reviewer (Canada)
Mr. Fernando PELAYO LOSCERTALES	Reviewer (Spain)
Mr. Douglas ILETT	Reviewer (UK)
Mr. Adrian SIMPER	Reviewer (UK)
Mr. Jeroen WELBERGEN	Reviewer (the Netherlands)
Mr. Andrew ORRELL	IAEA Team Coordinator
Ms. Rebecca ROBBINS	IAEA Deputy Team Coordinator
Ms. Kristina NUSSBAUM	IAEA Admin. Assistant

Review Scope

- As guided by the expectation of the *Waste Directive*, the review addressed the following topics:
 - The French national programme for the implementation of **the Policy for Radioactive Waste and Spent Fuel Management, its scope, milestones, deadlines, and the progress indicators**;
 - The plans for the establishment of a **detailed inventory** of radioactive waste;
 - The **allocation of responsibilities** between the different organizations involved in the various steps of the management of spent fuel and radioactive waste;
 - The **funding mechanisms** for the management of spent fuel and radioactive waste;
 - The French national **arrangements for public information and participation**; and
 - The **plans to ensure a high level of expertise, training and competence** in the management of spent fuel and radioactive waste.

Review Process

- Request and ToR
 - April 2017
- Preparatory Meeting
 - May 2017
- Workshop for the Review team
 - October 2017
- Advanced Reference Material
 - October and December 2017
- Presentations by French Authorities
 - 4 Days, January 15-18
- Cross Reference with Safety Standards
 - Continuous
- Group Discussions
 - Continuous
- Formulation of Recommendations – Suggestions - Good Practices
 - Draft to Final throughout the Review Mission

Main outcomes of Review Process

- **Recommendation**

When aspects related to IAEA safety requirements or other agreed review basis are missing, incomplete or inadequately implemented

- **Suggestion**

Opportunities for improvement

- **Good practice**

Recognition of an outstanding organization, arrangement, programme or performance superior to those generally observed elsewhere

Results - Recommendations

- NONE
 - Team consensus that French national program is comprehensive and coherent
 - Policies
 - National institutional, regulatory and organizational framework
 - Policy implementation through National Plan (PNGMDR)
 - Review Team was impressed with the nature and implementation of the French national program

Results - Suggestions

- Specify the implementation strategy at the national level of the policy requirement of decommissioning "in the shortest possible time", by translating this general policy requirement into obligations for operators or facility owners.
- Evaluate the current LLW-SL management paths to identify potential optimizations in consideration of future waste arisings.
- Finalise the current development of requirements related to storage and disposal of radioactive waste and ensure their issuance, per the 2017 IAEA's Integrated Regulatory Review Service (IRRS) follow-up item S18.

Results - Suggestions

- Clarify and formalize the role of ASN in the National Plan working group to enhance its high standards of independence.
- Consider options for optimization of VLLW management, including the potential for different approaches in different regions, and include from the outset representatives from devolved State services in consultations.
- Recognize the interdependencies between the realization of a next generation fleet of nuclear power reactors and the strategy for disposal of HLW, with the aim to identify inflection points whereby delay of the future facilities for reuse of spent fuel and nuclear materials affect the spent fuel management predisposal capabilities and capacities.

Results - Suggestions

- Consider creating a mechanism to permit small producers to transfer title and liability to Andra, or some other persistent entity, for waste disposal at an appropriate time after the acceptance for disposal.
- Consider financial risks to the state arising from entities outside the nuclear legislative framework and whether there should be some additional obligations vs. relying solely on the fiduciary duties of the companies, and provide clarity on this financial risk in the *National Plan*.

Results - Suggestions

- Consider a systematic view of financial prudence as it applies to decommissioning and radioactive waste management and apply an operator requirement to manage financial risk to the state and include a statement on this risk in the *National Plan*.

Results – Good Practices

- The systematic and structured manner of all the successive steps of management of radioactive materials and waste, taking account of all interdependencies and management factors and of all stakeholders.
- The legally binding character of, and continuing government commitment to, the key actions identified in the *National Plan* for the management of spent fuel and radioactive waste to ensure progress in the objectives of the national policy.
- The comprehensive *National Plan* includes all waste types and nuclear materials, as well as alternative future scenarios and management routes. Preparation, implementation and follow-up of the plan is well organized, main stakeholders are committed, continuous improvement of the plan takes place efficiently.

Results – Good Practices

- The approach to compiling, maintaining, and publishing the *National Inventory*, providing the *National Plan* with a thorough record of all radioactive materials and waste types, is commendable, as is the proactive effort to identify legacy inventories and sources.
- The development of preliminary safety cases or evaluations for facilities not only for the planned scenarios but also for scenarios resulting from a change in the national strategy fosters sound planning and decision making.

Results – Good Practices

- Requiring the creation of tangible assets to cover decommissioning and radioactive waste management liabilities and giving these assets legal protection.
- The efforts made by the major actors of the radioactive materials and waste management programme to establish, to develop and to maintain the necessary and required competence and skills of staff is robust and exemplary.

Summary & Other Observations

- Proactive attitude and professionalism of French staff at the review meetings
- Review team's collective opinion that France is in a good position to continue meeting high safety standards





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Thank you!

