PEER REVIEW REPORTS
FOR
IAEA RESEARCH REACTOR DECOMMISSIONING & DEMONSTRATION PROJECT (R2D2P)
6 – 10 JULY 2009, KARLSRUHE, GERMANY

NO.	ISSUE	PARTICIPATING COUNTRY		
		BRAZIL (4 RR)	**MALAYSIA (1 RR)**	**ROMANIA (2 RR)**
1.	Independent Regulatory Body	Regulatory body (CNEN) was already established by Law in 1956. Not completely independent since 4 research reactors belong to institutes of CNEN (operated by DPD/CNEN and regulated by DRS/CNEN). ❖ Initiatives towards independency - to establish new law. ❖ Expected to be approved by Q2-2010.	Regulatory body (AELB) was already established in 1985 but not totally independent (placed under one ministry with the operator). ❖ Initiatives has been made towards independency: ○ Amendment of Act 304, ○ Expected to be approved by Q3-2010	Regulatory body (CNCAN) was established in 1990. Totally independent since CNCAN was placed separately from research reactor. Now CNCAN is placed under the Office of Prime Minister.
2.	Legal and Regulatory Framework	Requirement for decommissioning plan is included in the regulations. New regulation to impose a standard format for the decommissioning plan.	Decommissioning was included in the Act 304 and Licensing Regulation 1986 but not clearly spell out. ❖ Will be clearly defined in the amended Act and Regulation.	Provision for decommissioning was clearly defined under the following: ❖ Legal: i. Law No. 111/1996; ii. Government Ordinance No. 11/2003; iii. Law No. 57/2006.

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				❖ Regulatory: i. NSN 15 (CNCAN norms on decommissioning).
3.	License / Authorization	Certificate – for operation of all 4 RR	License – for operation.	License: i. TRIGA – for operation; ii. VVR-S – for preservation as preparation for decommissioning.
4.	Decommissioning Planning / Implementation	Not available for 4 Brazilian Research Reactors. Initiative had taken in developing such decommissioning plan for all facilities.	Included in the Safety Analysis Report (Chapter 19) and QAP for decommissioning. Specific documentation for decommissioning plan is yet to be developed as the reactor is being proposed for upgrading. SAR document is scheduled to review and update in 2012, in parallel to the modification that planned as well as completion of Chapter for decommissioning.	2005 – Conceptual decommissioning plan was established and approved for TRIGA RR. Next revision-2010. 2008 - Final plan for the decommissioning of VVR-S RR was approved.
5.	Decommissioning Cost Calculation / Funding	Cost calculation was yet to be calculated. Initiatives in identifying the	Cost estimation was yet to be calculated. Initiatives in identifying the	Yes, cost calculation for the decommissioning of VVR-S research reactor was completed in the amount of €

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		criteria / factor for calculating the cost was made and will be considered in the draft decommissioning plan. The funding can be considered as secured as it is under the responsibility of Brazilian Government.	criteria for calculating the cost is being made and will be included in the revise SAR & QAP. The Government is fully responsible in funding the decommissioning and can be considered as secured.	34.3 Million. No cost calculation for TRIGA RR decommissioning. To be made by 2010 at the next revision of the DP, as per regulatory requirements. Funding mechanism is coming from State budget as an investment project and can be considered as secured.
6.	Progress and Achievement	i. Development of National Decommissioning Project; ii. Recognition by the government for the establishment of National Policy for Decommissioning; iii. Contracting Party to the Joint Convention. iv. Establishment of competent National Working Group for the development of documentations with regards to the decommissioning.	Manage to: i. Complete the Chapter 19 of SAR document; ii. Licensed the facility and requirement for decommissioning become one of License Condition; iii. Clearly define provision for decommissioning under projected Act; iv. Development of QAP for decommissioning.	i. A final decommissioning plan endorsed by ANDRAD and approved by CNCAN (VVR-S); ii. Cost calculation for implementation of decommissioning of VVR-S completed; iii. The repatriation of HEU spent fuel from VVR-S under the RRRFR project completed.

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7.	Issues / Challenges	i. Technical: Commitment and cooperation among the decision makers to achieve the decommissioning objectives; ii. Legal/regulatory: establishment of an effective framework to give clear directions to all decommissioning issues, regulatory independence ; iii. Administrative: effective engagement and efforts of staffs involve in the decommissioning project.	i. Technical: Facility is being proposed for upgrading to enhance the utilization. No intention to decommissioning in the mean time. ii. Legal/regulatory: Approval of amended legislation that address decommissioning issues and regulatory independence ; iii. Administrative: a. Lack of capable manpower involve in nuclear field including decommissioning b. Lack of knowledge and experience transfer due to retirement of competent senior staff	i. Technical: Identifying the relevant tools/equipments and technologies for decommissioning to minimize radioactive waste generated and management of waste. ii. Administrative: A cost estimation for the decommissioning of other facility (TRIGA); iii. Legal/regulatory: Completion/review of regulatory framework with missing specific regulations and standards.
8.	Remarks		Since Malaysia doesn't have any intention to implement the decommissioning yet, issues and challenges are still in the gray area.	

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