

EXECUTIVE SUMMARY

Upon the invitation of the Armenian Nuclear Regulatory Authority (ANRA), a peer review mission on safe long-term operation (SALTO) was provided to review programmes/ activities of the Armenian Nuclear Power Plant Unit 2 (“the plant”).

The design lifetime of Russian WWER-440 is 30 years. The plant was commissioned in 1980, temporarily shutdown in 1989 and restarted in 1995. Taking into account this operating history, the design operating period of the plant was determined to extend until September 30, 2016.

In 2011, the ANRA issued a license for an additional 10 years of plant operation. By terms of this license, the plant must demonstrate the preparedness operate beyond its original design operating period before 31 August 2016.

The mission reviewed completed, in-progress and planned plant activities related to long-term operation (LTO) including activities involving the ageing management of systems, structures and components (SSCs) important to safety.

Through the review of information obtained from available documents, programmes, presentations and discussions with counterparts and other members of the plant staff, the IAEA team found that the plant is facing an ambitious plan for preparation for long-term operation. Based upon the observations of this SALTO review, the team concluded that the plant has yet to complete a significant part of the activities important for safe long-term operation.

The human resources involved in the LTO project are quite limited given the limited time available to complete the extensive range of necessary LTO implementation activities. The team encourages the plant to continue its ongoing activities to allocate appropriate human resources and to prioritize LTO activities in order to fulfil the action plan successfully and in a timely manner.

The SALTO team concluded that plant management is committed to improving plant preparedness for LTO. The team found four areas of good performance.

The team identified areas for further improvement. Eleven issues were raised:

- With respect to the scope of the LTO programme and associated tight schedules, the plant activities and arrangements are at a very early stage and a lack of sufficient emphasis is endangering timely implementation of the LTO programme;
- The scoping and screening methodology for LTO leads to a broad list of items in scope of LTO assessment and, at the same time, does not provide requirements on identification of aspects needed for appropriate ageing management review;
- Lack of comprehensive review of modifications against design basis may lead to violation of design basis assumptions and jeopardize plant safety;
- Status of hardware and software to support a system for data collection and record keeping does not ensure timely implementation of the ambitious LTO programme;

- Recently established LTO organization is not yet fully integrated into plant administrative structure and identification of inputs of specific departments to LTO and vice versa is not properly documented and communicated to plant personnel
- Conceptual programme and the plant ageing management programme do not provide direction for evaluation of analyses involving time-limited assumptions;
- Ageing management review method is not adequately described in project guidance documents and work instructions;
- Pilot AMPs do not address all generic IAEA AMP attributes;
- The qualified life does not take into account the current operating parameters, diagnostic results, ambient and accident conditions;
- The qualified life for the LTO period is not analysed or revalidated for all required components;
- Roles and responsibilities, necessary administrative and technical provisions to implement ageing management programme for plant civil structures are not yet fully established.

A summary of the review was presented to the plant management during an exit meeting held on 23 April 2013. Plant management expressed a determination to address the areas identified for improvement and indicated an intention to invite a “Full-scope SALTO peer review mission” in a first half of 2016. “The 2016 full-scope SALTO peer review mission” will also be a follow-up of the current mission.

Appendix III of this report includes the team’s detailed recommendations and suggestions arising from this mission.