

## EXECUTIVE SUMMARY

At the invitation of ANAV, operator of Ascó and Vandellós Nuclear Power Plants (NPPs), the IAEA conducted a Pre-SALTO (Safety Aspects of Long Term Operation) mission at Unit 1 and 2 of the Ascó NPP and Unit 2 of the Vandellós NPP from 15 to 23 January 2019.

Ascó NPP Unit 1 and 2 and Vandellós NPP II (hereinafter referred to as ‘the plant’) have been in operation since 1984, 1986 and 1988. The units will reach their design lifetime of 40 years in 2024, 2026 and 2028. The company intends to extend their operation beyond the original design life time.

This Pre-SALTO mission focused on the status of activities for the long term operation (LTO) assessment of the plant. The review team consisted of two IAEA staff members (team leader, deputy team leader), six external experts and four external observers, covering all areas of the standard scope of a SALTO mission.

The team reviewed the completed, in-progress and planned activities related to LTO, including ageing management (AM) of the systems, structures and components (SSCs) important to safety and revalidation of time limited ageing analyses (TLAAs).

Through the review of available documents, presentations and discussions with counterparts and other members of the plant staff, the IAEA team concluded that the plant has a good basis to finalize all LTO related activities and demonstrate preparedness for safe LTO in a timely manner. Ageing management and LTO activities of the plant already meet many recommendations of IAEA Safety Standards. Other ageing management and LTO related activities are making good progress.

The team found the plant staff to be professional, open and receptive to suggestions for improvement. Walk-downs showed that the equipment is in good condition. The mission team observed that the plant management is committed to improving plant preparedness for LTO.

In addition, the team found several good performances, including the following:

- Well-maintained and user-friendly design basis documentation ensuring a good foundation for safe LTO;
- Comprehensive strategy for identification and revalidation of TLAAs for mechanical and civil structures and components (SCs);
- Effective management of generational human resources turnover.

The team found areas which should be improved to reach the level of IAEA Safety Standards and international good practices. Ten issues were noted:

- The plant has only partially analysed and documented the review of relevant IAEA Safety Standards as a basis for PSR;
- LTO policy does not identify the intended period of LTO and LTO implementation plan to coordinate all actions needed for LTO is not developed;
- Management of ageing is not demonstrated for all in-scope active SSCs for LTO;
- Review of operating experience of mechanical, electrical, I&C and civil SSCs for LTO is not complete;
- Condition assessment of in-scope mechanical SSCs is not adequate for LTO;
- Management of in-scope electrical and I&C SSCs` ageing is not complete for LTO;

- Technological obsolescence of SSCs is not managed in a timely and comprehensive manner;
- Documentation of scope setting and AMR of civil SCs is not retained in an auditable and retrievable form to allow demonstration that all ageing effects for in-scope civil SCs will be managed for LTO;
- Implementation of ageing management for civil SCs has not been completed for LTO;
- Coordinated and comprehensive knowledge management is not implemented to support LTO.

A summary of the results was presented to the plant management during the exit meeting held on 23 January 2019. The plant management expressed a determination to address the areas identified for improvement and indicated their intent to invite a ‘SALTO Peer Review Mission to Ascó Nuclear Power Plant Unit 1 and 2 in January 2021.