

EXECUTIVE SUMMARY

At the invitation of Kansai Electric Power Co. (KEPCO) in Japan, the IAEA conducted a SALTO (Safety Aspects of Long Term Operation) mission at Unit 3 of the Mihama Nuclear Power Plant (NPP) from 16 to 25 April 2024.

Mihama NPP Unit 3 (further referred to as ‘the plant’) has been in operation since 1976. The Japanese Nuclear Regulation Authority (NRA) approved the extension of the operational period of Unit 3 until 2036. KEPCO permanently shut down Unit 1 and Unit 2 of the plant in 2015.

The SALTO mission reviewed the status of activities related to long term operation (LTO) assessment of the plant against IAEA Safety Standards and international best practices. The review team consisted of two IAEA staff members (team leader and deputy team leader), six international experts and three observers from the Czech Republic, Finland, France, Korea, Sweden, the United Kingdom and the USA. The review covered the standard scope of a SALTO mission. The team reviewed the completed, in-progress and planned activities related to LTO, including ageing management of the structures, systems, 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 observed in the field of ageing management and preparedness for safe LTO that most topics are managed as recommended by the IAEA Safety Standards and other topics are planned to be addressed in upcoming years, while some activities are still in progress.

The team found the plant staff to be professional, open and receptive to proposals for improvement. The mission team observed that plant management is committed to improving plant preparedness for LTO. Walkdowns showed the plant is in good condition. In addition, the team noted several good performances. The following are the most important:

- Development of a systematic methodology for identification and management of design obsolescence and plant modifications.
- Use of benchmarking to enhance ageing management of the containment.
- Implementation of an effective mentoring programme using retired staff.

The team recognized that the plant’s intention is to consider the IAEA Safety Standards in preparation for safe LTO. The team identified 11 areas for further improvement, the most significant ones are:

- The plant has not developed and implemented a comprehensive LTO programme.
- The plant has not developed and implemented an adequate ageing management review.
- The plant has not developed a complete Equipment Qualification (EQ) Programme for electric, I&C, active mechanical and civil structure components.

A summary of the review was presented to the plant management and the regulatory body representative during the exit meeting held on 25 April 2024. The plant management expressed a determination to address the areas identified for improvement and will consider inviting a SALTO Follow-up Mission to Mihama Nuclear Power Plant Unit 3 in 2026.