



REPORT
OF THE
OPERATIONAL SAFETY REVIEW TEAM
(PRE-OSART)

MISSION
to
TAISHAN

NUCLEAR POWER PLANT
CHINA

9-26 JANUARY 2017

DIVISION OF NUCLEAR INSTALLATION SAFETY
OPERATIONAL SAFETY REVIEW MISSION
IAEA-NSNI/OSART/192/2017

EXECUTIVE SUMMARY

This report describes the results of the pre-operational OSART mission conducted for Taishan Nuclear Power Plant in China from 9 to 26 January 2017.

The purpose of an OSART mission is to review the operational safety performance of a nuclear power plant against the IAEA safety standards, make recommendations and suggestions for further improvement and identify good practices that can be shared with NPPs around the world.

This OSART mission reviewed eleven areas: Leadership and Management for Safety; Training and Qualification; Operations; Maintenance; Technical Support; Operating Experience Feedback; Radiation Protection; Chemistry; Emergency Preparedness and Response; Accident Management; and Human, Technology and Organization Interactions.

The team identified 23 issues, resulting in 13 recommendations and 10 suggestions. 9 good practices were also identified.

The team concluded that the plant is preparing and implementing commissioning activities in a systematic manner and has a strongly committed management and staff. The plant is continuously striving for safety improvement and will benefit from the Preoperational OSART mission proposal for future improvements. The good practices identified during the mission will also be disseminated by the IAEA to the rest of nuclear community via the IAEA OSMIR data base.

The team found good areas of performance, including the following:

- The use of experienced persons as shift team operation consultants to develop shift supervisors skills and behaviours in leadership for safety.
- Development and implementation of a comprehensive corrosion management programme for equipment and buildings, during the construction and commission project phases.
- The plant has implemented a process of walk-downs focused on ageing management during the commissioning phase, to identify the susceptible ageing effects of plant systems, structures and components (SSCs), focusing on areas susceptible to deterioration.
- The plant has developed dedicated arrangements to assist emergency personnel in obtaining information concerning their family and relatives in a timely and efficient manner. This allows emergency workers to have the reassurance needed to be able to maintain focus on their emergency tasks.

The most significant proposals for improvement were:

- The plant should develop arrangements which evaluate, control and minimise the cumulative impact of fire hazards between construction, commissioning and operations groups.
- The plant should enhance the implementation of the Foreign Material Exclusion (FME) programme in order to reduce the foreign material risk.
- The plant should fully develop, approve, implement and validate by exercises and drills the nuclear emergency preparedness and response arrangements included in the ‘On-site emergency plan’ before the first core loading.

- The plant should enhance its process for qualifying operational chemicals to ensure that the use of chemical substances and reagents will not have an adverse impact on safety related equipment.

Taishan NPP management expressed their commitment to address the issues identified and invited a follow up visit in about eighteen months to review the progress.