

EXECUTIVE SUMMARY

This report describes the results of the OSART mission conducted at Bushehr Nuclear Power Plant, Iran from 29 September to 16 October 2018.

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 nuclear power plants (NPPs) around the world.

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

The mission was coordinated by an IAEA Team Leader and Deputy Team Leader and the team was composed of experts from Armenia, Belgium, Brazil, China, France, Hungary, Slovenia, Sweden, IAEA staff members and an observer from China. The collective nuclear power experience of the team was approximately 310 years.

The team identified 12 issues, resulting in 6 recommendations, and 6 suggestions. 4 good practices were also identified.

Several areas of good performance were noted, including the following:

- The plant has in-house research and development and failure assessment capabilities and is also able to design and manufacture robots used for remote surveillance activities.
- The plant has developed a simple modification to the primary system chemistry monitoring system that provides quicker and more precise results while reducing radiation dose.
- The plant has developed a simulator that enhances their capability to train people to diagnose faults on the fire detection and protection systems.
- Before and during simulator training, a psychology specialist evaluates the performance and medical and psychological records of Main Control Room staff.

The most significant recommendations made by the team were:

- The plant should establish and implement a comprehensive severe accident management programme.
- The reinforcement of management expectations in the field should be enhanced to ensure these are fully understood and implemented by the plant personnel and contractors.
- The plant should improve its arrangements for adequacy of corrective actions and their timely implementation to prevent occurrence of similar events.
- The plant should ensure rigorous implementation of fire prevention and mitigation measures to ensure the safety of personnel and plant reliability.

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