

INTRODUCTION AND MAIN CONCLUSIONS

INTRODUCTION

At the request of the government of Sweden, an IAEA Operational Safety Review Team (OSART) of international experts visited Oskarshamn Nuclear Power Plant from 17 February to 5 March 2009. The purpose of the mission was to review operating practices in the areas of Management organization and administration; Training and qualification; Operations; Maintenance; Technical support; Operating experience feedback, Radiation protection; Chemistry; and Emergency planning and preparedness. In addition, an exchange of technical experience and knowledge took place between the experts and their plant counterparts on how the common goal of excellence in operational safety could be further pursued.

The OKG Nuclear Power Plant is situated on the Swedish east coast about 30 Km north of Oskarshamn. The company is part of business area Electricity Generation within E.ON Market Unit Nordic and is a subsidiary company to E.ON Kärnkraft Sverige AB. OKG is owned by E.ON at 54,5 %. The remaining 45,5 % of the shares is owned by Swedish subsidiaries to the Finnish energy group Fortum. The plant operates three BWR units. Unit 1 has 440 MW rated power and started commercial operation in 1972, unit 2 has 590 MW rated power and started commercial operation in 1974, unit 3 has 1060 MW rated power and started commercial operation in 1985. The OSART mission concentrated on unit 2 and common site systems. OKG has 950 employees and about 300 long term contractors.

The Oskarshamn OSART mission was the 151st in the programme, which began in 1982. The team was composed of experts from Armenia, Czech Republic, Finland, France, Germany, Slovak Republic, South Africa, South Korea, Spain and the USA, together with the IAEA staff members and one observer from Sweden. The collective nuclear power experience of the team was approximately 250 years.

Before visiting the plant, the team studied information provided by the IAEA and the Oskarshamn plant to familiarize themselves with the plant's main features and operating performance, staff organization and responsibilities, and important programmes and procedures. During the mission, the team reviewed many of the plant's programmes and procedures in depth, examined indicators of the plant's performance, observed work in progress, and held in-depth discussions with plant personnel.

Throughout the review, the exchange of information between the OSART experts and plant personnel was very open, professional and productive. Emphasis was placed on assessing the effectiveness of operational safety rather than simply the content of programmes. The conclusions of the OSART team were based on the plant's performance compared with IAEA safety standards and good international practices.

MAIN CONCLUSIONS

The OSART team concluded that the managers of Oskarshamn NPP are committed to improving the operational safety and reliability of their plant. The team found good areas of performance, including the following:

- An integrated management system which includes communication, quality structures and documentation links. All employees receive training on how the management system works and thereby gain easy access to documentation and indicators.
- The provision of effective and creative “hands-on” training such as those at the Barseback facility.
- A comprehensive In-Service Inspection (ISI) programme which includes a database for all ISI activities and also welding data.
- The use of an effective decontamination method for plant systems during outages has contributed to significant occupational exposure reductions in the past few years.

A number of areas where improvements could be made in operational safety were offered by the team. The most significant include the following:

- A consistent system for monitoring and screening corrective actions, according to their impact on safety, and then tracking them until their effective implementation, is not in place.
- Although the plant has procedures in place for the isolation and tagging of equipment, those procedures and their implementation are, in some cases, not sufficient.
- A system for modification categorization, in accordance with the safety significance of the modification, has not been established.
- The reporting, analysis and trending of low level events and near misses is not sufficient to allow the systematic and consistent identification of event precursors.

Oskarshamn management expressed a determination to address the areas identified for improvement and indicated a willingness to accept a follow up visit in about eighteen months.