

INTRODUCTION AND MAIN CONCLUSIONS

INTRODUCTION

At the request of the Government of Slovenia, an IAEA Operational Safety Review Team (OSART) of international experts visited Krško Nuclear Power Plant from 20 October to 6 November 2003. 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; Radiation Protection; Chemistry; and Emergency Planning and Preparedness. Also an enhanced review of Safety Culture was performed. 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 Krško OSART mission was the 121st in the programme, which began in 1982. The team was composed of experts from Canada, Brazil, United Kingdom, Sweden, France, Slovakia, and United States of America, together with the IAEA staff members and an observer from Ukraine. The collective nuclear power experience of the team was approximately 300 man years.

Before visiting the plant, the team studied information provided by the IAEA and the Krško NPP 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, toured areas in the plant, 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 good international practices.

The team also noted the openness of the regulatory authority role in this mission. The regulator asked the team to maintain special focus on areas important to safety, which are reflected in this report.

MAIN CONCLUSIONS

The OSART team concluded that the Krško NPP has several good features that form the basis for future safe operation of the plant; most significantly, a well educated, highly motivated, professional and experienced staff.

The senior management of Krško NPP is committed to improving the operational safety and reliability of their plant in a long-term perspective. The team found that Krško NPP has several strong attributes and programs, including the following:

- There is priority on nuclear safety at all levels of the organization.
- As a whole, the management of the plant has a depth of technical knowledge and a good background in nuclear plant operation.
- The plant has made effective use of computer technology to plan work, track activities and communicate within the plant.

However, although the Krško NPP has many good operational safety features, the team observed some areas for improvement. The most significant were:

- The industrial safety policy, practice and management involvement should improve.
- The plant should further address the volume and storage of low level waste.
- The plant should enhance the use and adherence to procedures in the field.

An important element of the OSART review is the identification of those findings that exhibit positive and negative safety cultural aspects of operational safety performance. The OSART team used the guidance provided in INSAG-4, INSAG-13, INSAG-15 and IAEA Safety Report Series No. 11 to assess various organizational and technological aspects of operational safety culture at the Krško NPP.

The overall impression by the team is that the plant has a strong safety culture, driven from the top with conscious efforts to inculcate the safety thinking in employees from the very start, the sharing of vision and standards in long-term partnership with subcontractors and by fostering an open and good relationship with the local community.

A stable work force with long experience in the plant has facilitated these developments.

Although a strong safety culture is evident in many ways, the term safety culture has only recently been more systematically introduced in the company together with efforts focused at assessing the safety culture of the organization. The development of the codex of safety and business ethics, together with the training given, has been the main means of introducing the safety culture concept.

The plant is in a transition phase with many future challenges in terms of aging plant, aging work force with soon to come retirements, increased economic pressures from owners and operating in a competitive market. A strong safety culture is paramount in being able to meet these challenges.

Krško NPP management expressed a determination to address the areas identified for improvement and indicated a willingness to accept a follow up visit.