

INTRODUCTION AND MAIN CONCLUSIONS

INTRODUCTION

At the request of the government of France, an IAEA Operational Safety Review Team (OSART) of international experts visited Chooz Nuclear Power Plant from 17 June to 4 July 2013. 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; Emergency planning and preparedness; and Severe accident management. 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.

Chooz Nuclear Power Plant is located in the French Ardennes department, a few kilometers away from the Belgian border, about an hour away from Brussels or from Luxembourg. Chooz NPP is one of the 19 nuclear power plants in France owned by the EDF Group.

Chooz NPP has two PWR N4 type units in operation with rated power 1500 MWe. The units were connected to the grid in 1996 and 1997. Start of commercial operation was in 2000 for both units. The plant employs 700 EDF staff and 200 permanent contractors.

The Chooz OSART mission was the 175th in the programme, which began in 1982. The team was composed of experts from Switzerland, Belgium, Germany, China, India, United Kingdom, Czech Republic, Canada, Hungary, together with the IAEA staff members and observers from United Arab Emirates and Russian Federation. The collective nuclear power experience of the team was approximately 317 years.

Before visiting the plant, the team studied information provided by the IAEA and the Chooz 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 and programmes compared with the IAEA Safety Standards.

The following report is produced to summarize the findings in the review scope, according to the OSART Guidelines document. The text reflects only those areas where the team considers that a Recommendation, a Suggestion, an Encouragement, a Good Practice or a Good Performance is appropriate. In all other areas of the review scope, where the review did not reveal further safety conclusions at the time of the review, no text is included. This is reflected in the report by the omission of some paragraph numbers where no text is required.

MAIN CONCLUSIONS

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

- The plant has adopted a programme for crossover professional development as part of a joint employment scheme shared by the plant and its contractors. This enables the trainees to carry out numerous activities, develop professional capability, understand practices and gain experience of different plants in terms of work planning and coordination;
- The plant has produced a humorous movie explaining the advantages of reporting low level events to ensure that operating experience is captured in a comprehensive manner;
- The Operations Department has set up self-assessment groups to discuss and resolve specific issues within operations. This has empowered the operations personnel and developed ownership for the improvement programmes;
- The plant has introduced enhancements for identification of ‘orange zones’ in radiation controlled area. ‘Orange zones’ are areas of elevated dose rates that require specific authorization for people to enter. In order to prevent inadvertent access the plant has established enhanced warnings at the entry to all orange zones.

A number of improvements in operational safety were offered by the team. The most significant proposed improvements include the following:

- The plant should review its process for the management of corrective maintenance and leak repair and implement it so that backlogs are minimized and the plant safety is maintained;
- The plant should more rigorously reinforce the safety related behavior of individuals in line with established management expectations and promote individual ownership of safety;
- The plant should enhance the process of root cause analysis of safety significant events to improve the depth of analysis of such events;
- The temporary modification process should be improved to ensure all changes to the plant are identified, evaluated, controlled along their lifetime and closed out in a timely manner.

Chooz 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.