

EXECUTIVE SUMMARY

This report describes the results of the OSART mission conducted for Golfech Nuclear Power Plant in France from 10 to 27 October 2016.

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 mission was coordinated by an IAEA Team Leader and Deputy Team Leader and the team was composed of experts from Brazil, Canada, Germany, Slovak Republic, South Africa, Sweden, Ukraine, United Kingdom, United States of America and the IAEA staff members. The collective nuclear power experience of the team was approximately 350 years.

The team identified 13 issues, 4 of them are recommendations, and 9 of them are suggestions. 9 good practices were also identified.

Several areas of good performance were noted:

- The development of a simple but effective system to remove radioactive particles from shoes, using rotating brushes connected to a HEPA filtered vacuum unit.
- The production of short training videos to be used in the training and during the Pre-Job Briefings to instruct staff in the deployment of plant specific mobile emergency equipment.
- The development and implementation of detailed procedure with rigorous control of chemical and radiochemical criteria during the reactor shutdown process to control the radioactive source term and ensure low doses to the maintenance workers.

The most significant issues identified were:

- The plant should ensure that management expectations are achieved and systematically applied in preparation or execution of tasks involving the use of procedures.
- The plant should ensure effective implementation of plant modifications. Temporary modifications should be limited in time and number.
- The plant should improve the system for developing and reviewing the effectiveness of its corrective actions to prevent reoccurrence of events.

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

INTRODUCTION AND MAIN CONCLUSIONS

INTRODUCTION

At the request of the government of France, an IAEA Operational Safety Review Team (OSART) of international experts visited Golfech Nuclear Power Plant from 10 to 27 October 2016. The purpose of the mission was to review operating practices in the areas of: 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. 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 Golfech Nuclear Power Plant is located in the commune of Golfech (Tarn-et-Garonne), on the border of Garonne between Agen (30km downstream) and Toulouse (90km upstream) on the Garonne River, from where it gets cooling water. It is approximately 40km west of Montauban.

The plant has two operating nuclear reactors, both pressurized water reactors of the French P'4 1300 MWe design. The first unit was commissioned in 1991 and the second in 1994. The plant has two cooling towers, only using water to compensate for evaporation; the cooling loop is closed and water is never released back into the river. It is operated by Electricité de France (EdF).

The Golfech OSART mission was the 190th review in the programme, which began in 1982. The team was composed of experts from Brazil, Canada, Germany, Slovak Republic, South Africa, Sweden, Ukraine, United Kingdom, United States of America, together with IAEA staff members and observers from the Netherlands, Slovak Republic and Russian Federation. The collective nuclear power experience of the team was approximately 350 years.

Before visiting the plant, the team studied information provided by the IAEA and the Golfech 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 are based on the plant's performance compared with 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 in which 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 Golfech NPP management fosters a strong culture that seeks the continuous improvement of operational safety and the plant staff is committed to excellent performance in all activities important to safety. The team found good areas of performance, including the following:

- The development of a simple but effective system to remove radioactive particles from shoes, using rotating brushes connected to a HEPA filtered vacuum unit.
- The production of short training videos to be used in the training and during the Pre-Job Briefings to instruct staff in the deployment of plant specific mobile emergency equipment.
- The development and implementation of detailed procedure with rigorous control of chemical and radiochemical criteria during the reactor shutdown process to control the radioactive source term and ensure low doses to the maintenance workers.

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

- The plant should ensure that management expectations are achieved and systematically applied in preparation or execution of tasks involving the use of procedures.
- The plant should ensure effective implementation of plant modifications. Temporary modifications should be limited in time and number.
- The plant should improve the system for developing and reviewing the effectiveness of its corrective actions to prevent reoccurrence of events.

Golfech 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.