

EXECUTIVE SUMMARY

This report describes the results of the OSART mission conducted for Paluel Nuclear Power Plant in France, from 20 September to 7 October 2021.

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 Long Term Operation.

The mission was coordinated by an IAEA Team Leader and Deputy Team Leader and the team was composed of experts from Belgium, Czech Republic, Canada, Hungary, the Netherlands, Ukraine, United Kingdom, the United States of America, and the IAEA staff members. The collective nuclear power experience of the team was 417 years.

The team identified 15 issues, resulting in four recommendations, and 11 suggestions. Nine good practices were also identified.

Several areas of good performance were noted:

- The plant management's establishment of a collaborative employee strategy to improve plant safety and performance.
- The development of a corrosion action plan to ensure equipment reliability as a part of a long-term operation programme.
- The establishment of so-called silent monitoring of emergency calls enabling medical staff to listen-in and be alerted to a possible medical emergency.

The most significant issues identified were:

- The plant leaders have not systematically ensured that plant staff are complying with requirements and standards for industrial safety and human performance in a rigorous and consistent manner.
- The plant work control process does not support the timely completion of preventive maintenance to ensure its safe and reliable operation.
- The plant operating experience programme does not always ensure that safety related events are adequately categorized, analysed, and have effective corrective actions to prevent recurrence.

Paluel 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 Paluel Nuclear Power Plant from 20 September to 7 October 2021. 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 Long Term Operation. 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 Paluel OSART mission was 211th in the programme, which began in 1982. The team was composed of experts from Belgium, Czech Republic, Canada, Hungary, the Netherlands, Ukraine, United Kingdom, the United States of America, and IAEA staff members. The collective nuclear power experience of the team was 417 years.

Before visiting the plant, the team studied information provided by the IAEA and the Paluel Nuclear Power 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 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 Paluel 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 management's establishment of a collaborative employee strategy to improve plant safety and performance.
- The development of a corrosion action plan to ensure equipment reliability as a part of a long-term operation programme.
- The establishment of so-called silent monitoring of emergency calls enabling medical staff to listen-in and be alerted to a possible medical emergency.

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

- The plant leaders have not systematically ensured that plant staff are complying with requirements and standards for industrial safety and human performance in a rigorous and consistent manner.
- The plant work control process does not support the timely completion to ensure its safe and reliable operation.
- The plant operating experience programme does not always ensure that safety related events are adequately categorized, analysed and have effective corrective actions to prevent recurrence.

Paluel NPP 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.