## EXECUTIVE SUMMARY

This report describes the results of the OSART mission conducted for Nogent Nuclear Power Plant (NPP), France from 13 to 30 May 2024.

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 10 areas: Leadership and Management; Training and Qualification; Operations; Maintenance; Technical Support; Operating Experience Feedback; Radiation Protection; Chemistry; Emergency Preparedness & Response; and Accident Management.

The mission was coordinated by an IAEA Team Leader and Deputy Team Leader and the team was composed of experts from China, Finland, Germany, Hungary, Slovakia, Spain, United Arab Emirates, United Kingdom, United States of America and IAEA staff member and observers from Czech Republic and France. The collective nuclear power experience of the team was approximately 361 years.

The team identified 10 issues, 4 of them are recommendations, and 6 of them are suggestions. Two good practices were also identified:

- The plant utilizes the Nuclear Safety Committee to validate the new core arrangement before fuel reloading.
- The plant uses a virtual reality system for fire-fighting extinguisher training to improve fire-fighting skills by developing scenarios in highly realistic conditions.

The most significant issues identified were:

- Maintenance staff and contractors do not always adhere to procedures, procedures do not always contain all the required information applicable to the task, and they are not always updated in a timely manner.
- The plant operational processes and practices used to support safe reliable operation are not always fully established and enhanced.
- The plant's arrangements for the setting of corrective actions and assessment of their effectiveness does not always prevent repeat occurrences of safety significant events.

Nogent 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 Nogent Nuclear Power Plant from 13 to 30 May 2024. 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 & Response, and 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.

The Nogent Nuclear Power Plant is located in the French commune of Nogent-sur-Seine, 120km southeast of Paris. The plant is owned and operated by EDF. The Nogent plant consists of two Units of pressurised water reactors with a reference output of 1300 MWe gross.

The Nogent OSART mission was the 223rd in the programme, which began in 1982. The team was composed of experts from China, Finland, Germany, Hungary, Slovakia, Spain, United Arab Emirates, United Kingdom, United State of America and IAEA staff member and observers from Czech Republic and France. The collective nuclear power experience of the team was approximately 361 years.

Before visiting the plant, the team studied information provided by the IAEA and the Nogent 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 leadership team of the Nogent NPP are committed to improving the operational safety and reliability of their plant. The team found two good practices which were:

- The plant utilizes the Nuclear Safety Committee to validate the new core arrangement before fuel reloading.
- The plant uses a virtual reality system for fire-fighting extinguisher training to improve fire-fighting skills by developing scenarios in highly realistic conditions.

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

- Maintenance staff and contractors do not always adhere to procedures, procedures do not always contain all the required information applicable to the task, and they are not always updated in a timely manner.
- The plant operational processes and practices used to support safe reliable operation are not always fully established and enhanced.
- The plants arrangements for the setting of corrective actions and assessment of their effectiveness does not always prevent repeat occurrences of safety significant events.

Nogent management expressed a determination to address the areas identified for improvement and will invite a follow up visit in about eighteen months.