

INTRODUCTION AND MAIN CONCLUSIONS

INTRODUCTION

At the request of the Government of France, an IAEA Operational Safety Review Team (OSART) of international experts visited Saint Laurent Nuclear Power Plant (NPP) from 24 November to 14 December 2006.

The Saint Laurent NPP is located on the left bank of the river Loire, between Blois and Orleans. The plant operates two 900 MW pressurized water reactors which were commissioned in 1981. There are two gas cooled reactors at the site which were shut down in 1990 and 1992 and therefore were not part of the OSART review. The plant employs approximately 660 member staff, about 50 additional staff is attached to other EDF entities.

The Saint Laurent OSART mission was the 138th in the programme, which began in 1982. The team was composed of experts from United States of America, Slovak Republic, Hungary, Slovenia, Germany, Korea and Finland together with the IAEA staff members and observers from Belgium and Korea. The collective nuclear power experience of the team was 325 years.

The team traveled to Saint Laurent NPP on Friday, 24 November 2004. Saturday and Sunday were spent in team training activities. Following the entrance meeting, which took place on Monday, 27 November; the team conducted the OSART review, completed the initial reports and presented its findings at an exit meeting on Thursday, 14 December.

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; radiation protection; chemistry; and emergency planning and preparedness. 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.

Before visiting the plant, the team studied information provided by the IAEA and the Saint Laurent 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.

The emphasis for the review was placed on assessing the operational safety performance and effectiveness of management systems rather than simply the content of programmes. The conclusions of the OSART team were based on the plant's performance compared with IAEA Safety Standards and good international practices.

MAIN CONCLUSIONS

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

- A “Fire Committee” including representatives of various plant departments analyses and implements rules and carries out inspections in the field;

- The site of Saint Laurent coordinates radioactive releases from the tanks of the four NPP sites located over a distance of about 200 km along the Loire river when the flow rate of the river is low;
- As part of management aiming to have innovative ideas come up from shop floor level, an innovative idea forum was put in place at the Saint Laurent plant in 2002; this forum involves also contractors and contributes to an EDF wide programme;
- The integration of local and corporate operating experience obtained in a participatory manner with all field staff has enabled the plant to improve outage performance and has led to a positive trend in plant results;
- A laser pointer is used in carrying out radiation and contamination surveys in application of the ALARA principle of optimization of individual radiation exposure;
- Management of radioactive source control was improved by implementation of new software.

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

- Senior management expectations, for continuous improvements in the quality of the plant, may not be clearly understood or being implemented at all levels in the organization;
- Operating personnel are not routinely identifying all plant deficiencies in the field;
- The safe and reliable operating conditions for the control room operating personnel are not periodically tested to verify the habitability of the control room in configuration of an emergency with radiological on site impact;
- Some plant equipment are not properly covered by plant (local) maintenance programmes;
- Some maintenance activities are not performed in accordance with industry standards and plant quality expectations;
- Some non-urgent corrective maintenance activities to be performed in one month (priority P2) are not performed within the time limit requested by operations.

Saint Laurent 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.