

Knowledge Preservation of Atucha Type Reactor: Practical Approaches and Lessons Learned

M. Eppenstein, C. Vetere

Atomic Energy Commission, Argentina

E-mail address of main author: meppens@cnea.gov.ar

The nuclear option is born in Argentina in 1950. Since then and after half century, the Argentine nuclear sector reaches a hierarchy and an important technological - scientific dimension in all the issues related to activities linked to the nuclear sector. The export of research reactors, the nuclear fuel production and the installation of nucleoelectrical power stations constitute one of the most outstanding achievements of this activity.

The Atucha I Nuclear Power Plant, of Siemens-KWU technology with 30 years of operation and Embalse (Candu type) with 20 years of operation, register an efficient and safe performance, within the worldwide standards. In addition, and with Siemens technology the Atucha II NPP is in construction with a 82% of work advance. At the moment Siemens, has transferred his place as designer of reactors LWR to the Framatom ANP Company and consequently Argentina will have to make all the efforts to assure the " knowledge preservation" of the technology of this line of reactors, if it hopes that Atucha I extends its useful life and Atucha II is finalized. Likewise the aging of the personnel in the sector is worrisome being numerous the great number of people who are close to retire what it worsens if we think that there are a few young people able in this specialty by the lack of the entrance of candidates in compatible races This situation generated the necessity to implement a system of Knowledge Management to capture and to capitalize the tacit and explicit knowledge, to spread it and to share by using techniques and tools adapted through the organization.

Practical Approaches and Lessons Learned

A - Analysis of the strategy:

The strategy was based on recognizing the critical knowledge by means of the use of a methodology that incorporates the technique of the map of the critical knowledge. That is to say, to recognize the patrimony of the knowledge around the reactor. The layout of the knowledge map of reactor together with the systematic analysis of criticities generated the architecture of the taxonomies of reactor Atucha type behavior as also it allowed to carried out its own actions of the knowledge management from the diagnosis of the it where proposals and actions arise destined to reduce the criticity and to put into operation the different processes system. (Cycle of Nonaka and Takeuchi)

B. - Technical of development and its disadvantages: Factors of analysis

How to restore a new methodology that requires of the application of techniques for personal and group interviews. It is essential to consider this time at the time of project planning.

The project demands much interaction with experts of different profiles and availability of their time because it involves to all the nuclear sector and the complete service life of the Reactor (project, design, operation, decommissioning, dismantling).

Effects of the operation state of plant in the accomplishment of different activities from the project

The infrastructure of the ITC of different generations that coexist can force to generate migrations of information and to develop new additional tools.

The limited HHRR, financial resources, the administrative circuits, the different corporative cultures that coexist and the critical knowledge that keeps in mind of people close to get their retirement, require of an exhaustive previous analysis to determine their influence in the criticity of the system.