OSART Good Practices CORP. OPERATING EXPERIENCE Utilization and dissemination of operating experience

EDF corporate, France

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Crafts and expertise networks

The networks regroup various actors on common topics to support the sites in multiple areas such as nuclear safety, operations, maintenance, fuel/core, industrial safety, environment and radiological protection, and to share and transfer knowledge and skills. Thus, these networks contribute to the adherence to nuclear safety requirements.

Description:

To better take account of the effects of its nuclear fleet, EDF has created several types of networks:

• Systems Reliability (i.e., primary systems, feedwater systems, heat sink, I&C, etc.) and Components (i.e. valves, rotating machines, boiler making, I&C, etc.).

· Expert Networks in specialised areas:

oAssistance on analysis of measurements, quick diagnostic and prognosis in case of detection of a risk situation via monitoring (i.e., generators, transformers, pumps monitoring)

· Post-maintenance testing of equipment and systems after an activity

• Networks on more general topics: chemistry, units production, external leaks (Housekeeping), Rules concerning conventional and nuclear pressurised vessels, the fuel/core area (physical tests at start-up, criticality follow-up at refuelling, reactivity management, fuel handling), industrial safety (lifting,...), environment, radiological protection (ALARA, X-ray tests, work sites)

Crafts networks: nuclear safety engineers, shift managers, heads of: maintenance department, engineering/reliability department and fuel department, industrial safety engineers, radiological protection engineer, SME managers

Regular meetings are organised by the network coordinator. Requests to the network are initiated by a site or by Corporate. Networks can gather the competencies of experts in generation, engineering, R&D, even the manufacturer.

Benefits:

Networks allow to share OPEX identify and share good practices. In new risk situations, requests to networks are initiated to facilitate diagnostic and the prognosis and to provide a guide on actions to be implement on the short and medium term. Recommendations on the strategy to follow to process a technical issue are formalised in the "Fiches de position."

The networks contribute strongly to the professionalization of their members and can give orientations on training in order to anticipate and deal with situations with stakes. For OPEX, the networks are in charge of writing guides where the know-hows are collected.

Results:

There are 18 Systems and Components Reliability Networks in the reliability area. Some examples of results achieved by the networks: in 2013, the Corporate Fleet Engineering Support issued 231 position statements and 211 in 2014.

The networks have produced several guides on:

• Post-maintenance test, diagnostic help for the generators, transient analyses, etc.

□ The reference guide on physical tests performance at zero power, the Good Practices guides to optimise up-powering.

Networks have participated in:

• The reduction of unavailabilities. The ASG-LLS network participated in the reduction of LLS turbine generators (2013: 3,7 JEPP; 2014: 1,32 JEPP) and ASG pumps (2013: 4,75 JEPP; 2014: 0 JEPP) unavailabilities.

• The improvement of NPPs performances on collective and individual dose rates and on the management of X-ray test