

# OSART Good Practices

## CORP. MAINTENANCE

### Work control

EDF corporate, France

Mission Date; 24 Nov.-5 Dec., 2014

Maintenance

Simple visual aid to assist preparation of NPP on-line and outage maintenance schedules.

#### Description:

In 2009, EDF corporate management validated a new process for on-line activities and in 2013 for outage preparation, inspired by the AP928 approach and described in corporate document DT296 for online and DT196 for outage. This model supports the everyday site organization and performance, and the preparation of the implementation of the new nuclear information system (SDIN).

To reduce the component's unavailability, equipment is grouped by category (GEF) to support preventive maintenance tasks to be carried out simultaneously. A central component e.g. pumps, or cooler, with auxiliary components identified as belonging to the same equipment category is created.

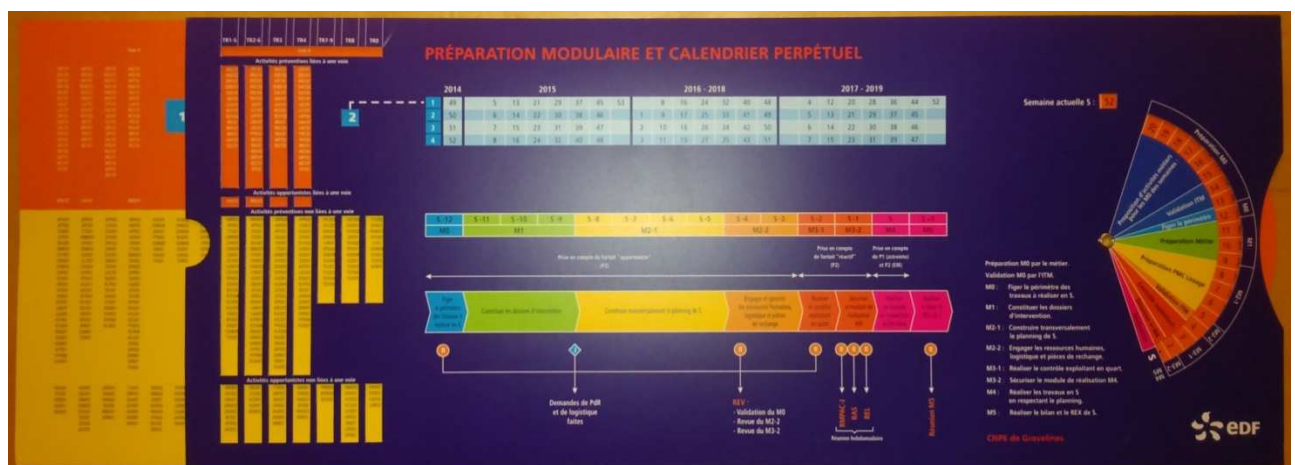
For outage preparation 7 modules are used and easily visualized on this disk.

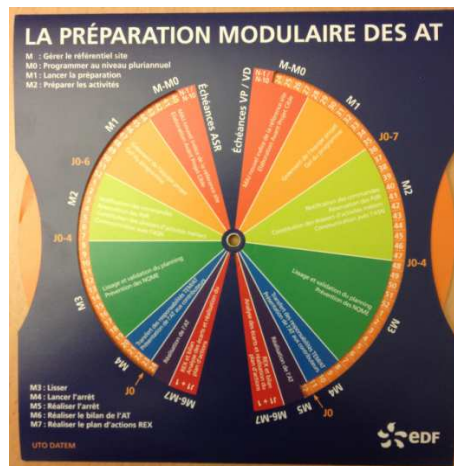
#### Advantages:

Every eight weeks, maintenance windows are planned for each GEF. With the adjustable wheel for given week, all open GEF for maintenance are located on the same safety train, while work lasting less than a week is scheduled during these maintenance windows. The eight week periodicity also incorporates safety-related surveillance testing from technical specification requirements. Longer work activities are linked to operating windows that depend on the time period in the operating cycle or on environmental conditions (winter, summer, etc.)

For each reactor series (CP0, CPY, 1300, N4) and based on this model, a reference schedule was built jointly between the corporate departments (UTO, UNIE) and the NPP's. The work management system (SYGMA or SDIN) is updated accordingly via a network and yearly approved by DPN senior management.

The Gravelines site has developed a simple tool to display GEF scheduling as it is not easy to mentally display a time period eight weeks ahead of time, dealing with multiple units on a single site.





**Results:**

This tool displays the status of modular preparation, for each of the upcoming weeks. In addition, a sliding system easily displays GEF categories available for maintenance, with time (weeks between now and 2019) and space (unit, equipment) marking, all this gathered in a simple visual aid with wheel and slider that is easy to understand and provides a practical tool for on-line schedulers and work planners. If emergent work is to be added to the schedule, it is easy to visualize when the relevant GEF window will be open.

It can be also used as a training tool for those working with the schedule, but not in charge of creating it.

This perpetual scheduling system is a user-friendly display of maintenance activity sequencing. For the operations crews in charge of approving and apply the schedule, it is a good tool that helps understanding how the schedule was built.