

OSART Good Practices

OPERATIONS

Work Authorizations

Gösgen, Switzerland

Mission Date; 8-25 November, 1999

The plant's computerized permit-to-work system has a function of printing automatically the self-adhesive tagging labels with entries meeting special requirements such as warnings of potential hazards due to live anti-condensation heater and twin supplies. Equipment room number and individual verification requirements for safety and electrical systems are also printed on the label automatically. The labels are orange in colour and sized for using on control room panels, local switches and field equipment such as valves and actuators. During de-isolation the labels are retrieved from the point of isolation and returned to their resident position of the mother sheet. Any label missing from the mother sheet indicating the de-isolation process is incomplete. All labels are signed off by the person responsible for isolations/de-isolations and by the second person in the case of double-check. This tagging label system provides shift supervisor the quick overview of the isolation/de-isolation status in the main control room.

Mühleberg, Switzerland

Mission Date; 6-23 November, 2000

The IBFS (Integrated Operation Management System) is an excellent tool for planning and processing all deficiency reports, work-orders and related work-sheets and managing the Periodic Work-order-System (WKAU). WKAU annually manages 16 000 operations tasks for tagging equipment and returning equipment to service. 1600 Standard Tagging lists are also available. IBFS provides the basis for the plant daily meetings and is distributed electronically throughout the plant. This includes access to the information through computer terminals in the controlled area.

Standard tagging lists are available in the IBFS system for all important systems and components. These lists have been verified by a formal quality control process ensuring that correct tagging is carried out. All components within the tagging boundary are linked to the tagging list, making selection of the correct list easy. Human errors are also reduced. All of these prepared tagging lists are quality assured with sufficient rechecking. A good example of the benefits of this standard tagging is the provision of efficient and safe tagging for outages with little requirements.

The WKAU is an excellent tool for managing periodically required activities and for distributing the work-load uniformly. By using the standardized task plans, workers are not required to prepare new plans each time the task is performed. Examples of this application are:

- programming of all periodic checks required by the Technical Specification;
- programming of all other periodic activities required for operation of the plant;
- programming of periodic administrative and statistical tasks.

with an excellent search program providing a reliable overview of work-orders and their processing status. In addition, history of defects and maintenance are promptly available. This system has been used in the plant to better prepare the work to be performed and make available maintenance experience feed-back.

Kashiwazaki 3/6, Japan

Mission Date; 1-18 Nov, 2004

Field checking of deficiencies.

An updated list of deficiencies (MRF) is enclosed to the standard parameter patrol sheet with a logical sequence of steps of the patrol during routine field operator's patrol. This list is updated weekly. New deficiencies that could appear during this week period are added manually to this list. Each route has its specific updated list of MRF deficiencies. Field operators can easily check MRF actual status and development. Regular checking of all MRF deficiencies are guaranteed this way and field operator's patrols are effective.

Penly, France

Mission Date; 29 Nov.-16 Dec., 2004

Outage valve line-up implementation monitoring guide

The Outage Operations Team (ECAT) is in charge of the smooth running of the various line-up phases in order to meet the objectives of nuclear safety (equipment availability) and efficiency (compliance with schedule). In order to facilitate this monitoring and to anticipate activities, the ECAT has produced a line-up implementation monitoring guide. It restates in an easily understandable way, the implementation link-up phases and the various line-ups to be carried out to ensure equipment availability as soon as possible. This guide is used by the ECAT for monitoring and by the shift teams to better understand the sequencing of the various activity packages that are required of them.

This guide enables the nuclear safety to be enhanced in the field of line-ups thanks to the visual monitoring that it allows. Communication on the current status of line-ups is thus facilitated. The original inspiration for this document came from the field operators seconded to the outage structure.

Cernavoda, Romania

Mission Date; 22 Jan.-10 Feb, 2005

Different colors for each year's deficiency tags make old unresolved problems more visible. This programme is in addition to other programmes that track deficiencies.

Computerized aid to shift supervisor to check technical specifications compliance before authorizing work permits.

The shift supervisor (SS) has the overall responsibility to ensure that the availability of safety system conforms to plant technical specifications at all times. Before authorizing any work permit, the SS must use primarily the technical specifications manual and his own knowledge.

To support the shift supervisor in the technical specifications conformance control, the LOMAX information system has the following convenient features:

- Component database specifies components related to technical specifications. When a technical specifications related new work request is introduced, it is notified and transferred to the shift supervisor for approval.

- LOMAX system also contains information on the redundant, parallel safety systems as well as information about power supplies and other support systems to the technical specifications related component. When the shift supervisor authorizes a work permit related to some safety system, the system will indicate, if there are already current faults or work orders in the other redundancy or parallel component. This feature ("cross fault checking") supports the shift supervisor in identifying these conditions.

This system provides a helpful support to the shift supervisor and permits to reduce the risk of error or omission when authorizing work permits related to components covered by technical specifications.