OSART Good Practices
LEADERSHIP AND MANAGEMENT FOR SAFETY
Safety culture

Ignalina, Lithuania

Mission Date; 5-21 Jun., 2006

At INPP 2 systems for monitoring and analysis of safety culture have been developed and implemented.
Both systems are effective tools for management in monitoring safety performance and safety culture.
The first system concerns an assessment among staff, using a survey on safety culture that was developed with the aid of the aid of IAEA and experts from UK and Sweden. On average the survey is done every three years. The questionnaire consists of 33 questions. Answers are grouped towards 11 safety culture characteristics, i.e.:
-Leadership and commitment of top management to safety;
-Safety role of line management;
-Strategic business importance of safety;
-Supportive organizational culture;
-Involvement of employees in the process of safety enhancement;
-Study of operating experience;
-Measurement of safety performance;
-Mutual trust and responsibility of management and employees;
-Openness of communication;
-Absence of safety vs. production conflict;
-Demonstration of care for personnel by administration.

Safety culture monitoring consists of 5 stages:
-Detection of problem areas (causes of safety level degradation);
-Prioritization of each problem area;
-Analysis by determining relationships between the problem areas and the safety culture characteristics;
-Detection of low safety culture characteristics;
-Development and prioritization of corrective actions for safety culture development.
In this way trends on safety culture characteristics are available for management to make an assessment and define, if required, corrective actions.
This monitoring and analysis started in 1998 as a first trial among few numbers of staff (30 employees). In 2000 and 2004 the survey was done among 300 employees. The overall results were generally positive.
The second system comprises a set of 6 safety culture indicators. Some indicators are connected with follow-up of safety related corrective actions, others are characteristics to human performance.
The use of the indicators started in 2004. Information on changes of the safety culture indicators is regularly provided to the Director General; it is subject of discussion with the heads of the departments of the plant and a report is also forwarded to the regulatory body.
At the end of each year completed actions are analyzed and a progress report is made, which is also submitted to the regulatory authority. This information can be found on the intranet and is available to the staff.
This safety culture monitoring system allows top management and line managers to determine trends in nuclear safety performance and culture and corrective actions can be defined if needed.

Mihama 3, Japan

Mission Date; 20 Jan.-5 Feb., 2009

The KEPCO and their NPP sites developed a comprehensive process to assess their own safety culture every year. From this assessment issues were identified and countermeasures are planned, implemented and reviewed.

Methods of assessment:

1.The plant assess the awareness and behaviour of personnel and/or organization in the focus of three key points of safety culture, 'the commitment by the top management', 'communication' and 'learning organization'. Each of three key points is assessed through several questions. For example, 'the commitment by the top management' is assessed using following four questions in FY2008.
(1)Does the senior management clearly show the 'safety is the first priority' policy to the staff?
(2)Are the responsibility and the authority of each organization clear and appropriate?
(3)Do the front-like workers understand the view and concept of the top management and put it in practice?
(4)Are the amount and allocation of resource proper?

In order to assess more objectively, relevant parameters, information, activities and results of questionnaire are collected and trended for each question. For example, following items are collected for question (1).
- Number of the messages given directly from the top management
- Number of the messages given through e-mail from the top management
- Results of the questionnaire
- Contents of the business plan and management plan etc.

The opinion from the employees, management and contractors are also collected and used for the assessment of each question.

2.The plant also evaluates the results of safety status, including plant safety, industrial safety and compliance status, and determines whether or not there are any problems in the awareness and behaviour of personnel and organization based on the results. This evaluation is implemented as a supplement for above 1 assessment.

3.The plant estimates perception of society, based on outside opinions from the local society and Nuclear Maintenance Reform Verification Committee.

The plant identifies 'Issue' and 'Concern' through these assessments. Action plan is developed for the identified 'Issue' and implemented from next FY. The status of these action and 'Concern' is followed up in the next safety culture assessment.

Doel, Belgium

Mission Date; 8-25 Mar., 2010

Use of competency grades to measure safety culture and reduce errors due to human behavior

–The plant has developed a set of competency grades to measure safety culture and reduce errors due to human behavior. The competency grades are used to measure the maturity of a team (or an individual) with regard to the use of each of the eight Human Performance tools:
oSelf management tasks: Situational awareness, Self control & organisation,
oManagement tasks: Pre-job briefing, Post-job debriefing, External verification and Observation,
oCommunication & decision tasks: Effective communication, Careful decision making,
oWork & procedure tasks: Smart use of procedures.

–Every team member was graded for the first time in 2009 following a self assessment exercise carried out by the team leader, his manager and the Human Performance coach. The results of this exercise serve as one of several input sources for the self assessment of all the operational teams. In 2010 this grading is being performed for the second time in order to identify progress and to assist team leaders in proposing concrete personal development plans.

–The above set of competency grades is used to evaluate contractors during their mandatory 4-day training in Nuclear Safety. In 2009, during outages, contractors were evaluated in the field using the same set of competency grades. The results of this evaluation are integrated into the contractor evaluation system.
The comparison of the 2009 and 2010 results clearly reveals an increase in the maturity of teams with regard to the use of human performance tools.

Sizewell B, UK

Mission Date; 5-22 Oct., 2015

Daily Safety Message and Plant Status Brief

All work groups, including contractors, start the day with a common brief, to ensure fitness for duty and an understanding of plant status and priorities. A common daily safety message is also discussed.

This is a two or three stage process. The station management team hold their brief, using information from the Operations Shift Manager's log. The brief includes plant status and also the operational priorities set by the Shift Manger. Daily condition reports and other new OPEX are considered. There is discussion of the daily safety message, which is used at all locations (power stations and headquarters) in the Nuclear Generation organisation. The managers then cascade this brief to all their workers in one or two further stages. These briefings also include a check that everyone is fit for work.

Once this has been completed each supervisor continues with setting his team member(s) to work (Setting to Work) by ensuring they are SQEP (Suitably Qualified and Experienced), that they have the correct documentation, and that they have received an appropriate Pre-Job Brief.

The Pre-Job Brief is specific to the task, where the supervisor and team members discuss error likely situations, safety concerns, critical steps, previous operating experience, and the use of error prevention tools to control any identified issues.
Because of the daily safety message, staff has a good awareness of a wide range of safety requirements. The start of day brief also allows workers to mention any concerns they have regarding their fitness for their work. The use of the station log and condition reports allows all workers to know the state of the plant, the key priorities all work groups must respect and any immediate OPEX.