USNRC 20th Annual Regulatory Information Conference

Use of lessons learned from Operating Experience – IAEA perspective

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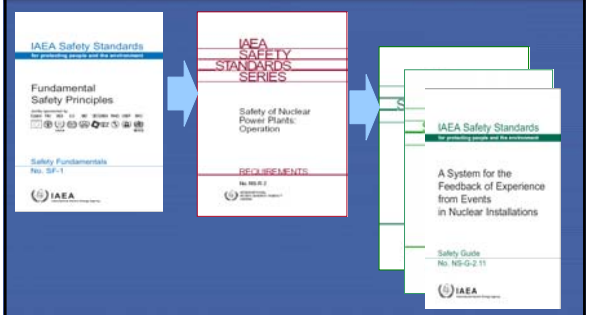
IAEA
International Atomic Energy Agency

IAEA Safety Standards on OE including TECDOCs, OSART, PROSPER, IRS



International Nuclear Safety Experience Feedback

Issues and Trends for CNS,

Annual Nuclear Safety Reviews, Topical Studies, OSART highlights, Blue Books

IRS, IRSRR, FINAS, Missions Results, OSMIR, Meetings…

OSART, OSMIR database

- **Assist Member States to improve Operational Safety – OSART (Operational Safety Review Team)- Recommendations, Suggestions**
- **Assist Member States to improve Operating Experience Feedback – PROSPER, OSART OE module (since 2005 – now core area) - Recommendations, Suggestions**
- **OSART Good Practices on the web http://www-ns.iaea.org/reviews/good-practices.htm**
- **OSMIR Database: OSART Mission Results Database, results from 66 OSART missions, 45 follow-up visits from 1991, 2483 Recommendations, 1528 Suggestions and 647 Good Practices, Distributed on CD-ROM**

Most significant OE OSART findings

a) Reporting: Plant staff do not take all available opportunities to report deviations and near-misses.
b) Analysis: Managers missed opportunities to use root cause analysis and effective trending to further understand plant issues necessary to develop effective corrective actions.
c) Corrective actions were not effectively prioritized.
d) Plant procedures did not contain specific guidance or criteria for the use of OE. For example, a plant had no policy regarding the use of OE in pre-job briefings. The plant had developed a general pre-job briefing checklist but it had no listed item regarding the use of OE.
e) Lack of OE performance indicators e.g. there was no performance indicator regarding recurrent events.

PROSPER-Peer Review of the Effectiveness of the Operational Safety Performance Experience Review

The IAEA PROSPER service has been developed to:

- **assess the effectiveness of the procedures, processes and programmes related with the operating experience process**
- **to ensure that lessons are learned and are used proactively to enhance operational safety performance.**

Incident Reporting System (IRS) Improvements

- Web-Based IRS – over 930 users (utilities,regulators, technical support organisations)
- Event Review Process & Event Review Group
- Common platform for events at different facilities, including events at decommissioning facilities
- IRS guidelines
- Other areas of work
  - Screening press information
  - Lower level events
  - Topical Studies

IRS Further Improvements

These include addition of:

- A discussion forum on the web-based IRS
- Feedback on actions taken by the plant
- Regulatory aspects including regulatory response/actions with regard to previous similar events
- Incorporation of good practices
- IRS Topical Studies

Recommendations to improve reporting and use of OEF

- Make the process simpler for reporting and use.
- Break the barrier that reporting of incidents/events is negative e.g. change the name to something non threatening like *Lessons Learned from Operating Experience*
- Use topical studies and case studies to show how other countries are using operating experience. This will help in indicating the benefits of using and sharing operating experience.
- Do not link reporting of events to the INES scale.
- Many events result in lessons learnt that are not unique only to plants in operation but can also be important to plants in outage, new plants, plants under construction and even plants undergoing decommissioning – these lessons should be shared.

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Conclusions

- **The importance of OEF as a key component in ensuring safe and reliable operation is recognized.**
- **Findings from the various IAEA missions indicates the need for strengthening of the OEF programme in many NPPs.**
- **Continual recurrence of events, whose 'root causes' have previously been identified and shared throughout the nuclear community, is a major challenge.**
- **Low Level and Near Miss event reporting is still an issue requiring attention;**
- **Shared experience is invaluable in determining actions to be taken by operators, should an event occur, to mitigate the potential consequences of design or operating weaknesses.**
- **The lessons learned now can be incorporated into new designs for future generations of nuclear power plants.**