

Synthesis of questionnaire survey

Technical Meeting on Safety Culture Oversight
**Fostering a Positive Dialogue
on Safety Culture
between Regulators and Licensees**
J8-TM-40410

The diagram consists of five yellow circles with blue borders, each containing a key concept: 'Safety' at the top, 'Leadership' on the right, 'Integration' at the bottom right, 'Learning driven' at the bottom left, and 'Accountability' on the left. These circles are arranged in a pentagonal shape around a central photograph of a nuclear power plant with cooling towers and buildings, set against a backdrop of mountains and a blue sky.

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IAEA
International Atomic Energy Agency
Atoms for Peace

Anne Kerhoas
IAEA/NSNI

OUTLINES

- 1. General features**
- 2. Questions**
- 3. Member States**
- 4. Questionnaire synthesis**

General features

- Scope : national regulatory approaches used in the oversight of safety culture
- Coordination : the IAEA used as a basis the questionnaire prepared by OECD/NEA and addressed to OECD Member States last May in preparation for the 10th International Nuclear Regulatory Inspection Workshop organized by OECD/NEA

12 questions

Q1-Are there any **regulatory requirements** related to safety culture in your organization? Yes / No

Q2-If yes, describe the regulatory requirements.

Q3-In the absence of regulatory requirements, how does your regulatory body **convey its expectations** regarding the importance of safety culture for nuclear safety and the promotion of safety culture, (e.g. the content of a safety culture programme and the need to be proactive) to operators/licensees?

Q4-How does your organization **oversee compliance** with its safety culture expectations for operators/licensees (e.g. routine inspections, special inspections, inspection criteria) in the absence of regulatory requirements?

Q5-How does your oversight programme **convey** to operators/licensees that the organization's expectations for the implementation of a safety culture **programme have or have not been met** (e.g. management meetings, documentation of inspection findings, enforcement or regulatory actions)?

Q6-How does your organization **train its staff** in the oversight of safety culture (e.g. does it use experts educated in this area, and/or does it train its inspectors)?



12 questions-Cont.

Q7-How does your organization **avoid subjectivity and maintain consistency** when overseeing safety culture?

Q8-How does your organization fairly **communicate findings** in the area of safety culture **to external stakeholders** (e.g. other operator/licensees and the general public) to ensure that its findings are not mischaracterized or taken out of context?

Q9-How does your organization assess **the effect of safety culture on decision making process of operators/licensees** (e.g. performing maintenance or equipment testing in a plant configuration that meets technical specifications and regulatory requirements but reduces the margin of safety)?

Q10-What have been the **outcomes and findings associated with your oversight** of the safety culture of operators/licensees?

Q11-What **problems or difficulties** did you recognize in dealing with safety culture oversight?

Q12-What would you like to **learn** about the oversight of safety culture at the **technical meeting**?



List of Member States who answered

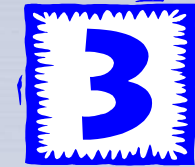
- Belgium
- Bulgaria
- Canada
- Finland
- France
- India
- Indonesia
- Italie-Enel
- Lithuania
- Mexico
- Pakistan
- Romania
- Slovenia
- Sweden
- Switzerland
- UK
- Ukraina
- USA

Questions 1 & 2-Trend



- **About 50 % MS** mentioned having no regulatory requirements related to SC
- **When existing, requirements are addressed at the law level** for example, in Government Decree on the Safety of nuclear power plants, in Nuclear Energy Act, in ordinance on nuclear energy.
- **Reference to IAEA GS-R-3 , in particular, requirement 2.5 “ the management system shall be used to promote and support a strong SC...”**

Question3-Trend



- Interventions at the senior management level, using meetings and discussions
- Annual inspection reports
- Guidance documents approach
- Seminars and conferences
- SC working group together with operators/licensees

Question4-Trend



- Incorporating inspections against SC expectations into routine inspections.
- Overseeing SC through the licensee SC self-assessment
- Targeted SC reviews, triggered by findings or by incidents
- Analysis of safety relevant events
- **The process for consolidation of data gathered during those inspections is not really described in the answers.**

Question4-Trend-The topics reviewed

- Low threshold and blame free reporting culture,
- Sufficiency of resources and appropriate qualification of staff,
- Quality of safety reviews in modification process,
- Knowledge of work processes and compliance with procedures,
- Definition of responsibilities,
- Questioning attitudes of plant staff,
- General attitudes towards the regulator,
- Housekeeping and material conditions of plant,
- Effectiveness of problem identification,
- Evaluation and resolution,
- Sub-contracting processes,
- Quality of written documents,
- Workload,
- Safety leadership,
- Managing critical people in the organization,
- Proactive tools (e.g. pre-job briefings, operational decision making),
- Self/independent assessments

Question5-Trend



Means

- Reports on a yearly basis
- Meetings at the senior management level

Content

- Findings and corrective actions
- Good practice and areas for improvement warranting further discussion.
- Not standing alone artifact but discussed together with other technical and safety related issues.

Question6-Trend



- MS trained their inspectors in SC
- SC is integrated in regular training inspector curriculum
- Newcomers can benefit from training on SC
- Knowledge of SC is conveyed through attendance to international workshops or internal seminars
- SC specialists covering background such as psychology and sociology.
- **The answers provided us with very limited information regarding the content of the SC training developed**

Question7-Trend



- **Several data collection techniques**
- **Facts are collected**
- **Pair and/or team opinion**
- **Design oversight principles** (*1) transparent; 2) understandable; 3) objective; 4) predictable; and both 5) risk-informed and 6) performance-based.*)
- **Generic questionnaire**
- **Training**

Question8-Trend



- The trend is **YES**
- General statements on safety culture like „this plant has a good safety culture” are avoided

Question9-Trend



- Observations of work groups, *for example during pre-job briefings*
- Probabilistic risk analysis
- Part of our technical inspection
- Not analyzed

Question10-Trend

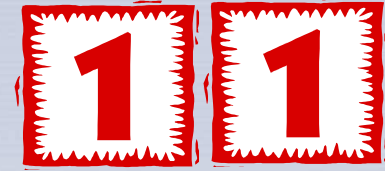


A global picture on safety culture

Some findings

- *Licensee's approach to the self-assessment of safety culture,*
 - *Difficulties to give priority to safety in certain real-time decision-making situations*
- &**
- *The work pressure in achieving production targets/ keeping to the schedule of outages could be a major cause affecting safety culture.*
 - *Changes in NPP organization structure and personnel in order to archive the NPP decommissioning goals.*
 - *Openness to the RB is selective*
 - *Initiating a self-reflection process with the licensees is of a considerable value*

Question11-Trend



- **Lack of :**
 - ✓ a common understanding of the concept of safety culture
 - ✓ social and psychological background of the inspectors
 - ✓ clear and measurable criteria for SC evaluation and assessment
- **Diversity of facility types**

THANKS FOR YOUR ATTENTION

