

NRC Regulatory Information Conference

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**International Regulatory
Experience**

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Regulatory Issues

- ***Future nuclear regulatory challenges***

- *regulatory effectiveness*
- *safety culture*

- ***Recent developments at STUK***

- *renewed inspection program*
- *performance indicator system*
- *risk-informed regulation*
- *planning and evaluation of activities*
- *assessment of organisational culture*
- *quality system*

- ***IRRT Mission to Finland***

Regulatory effectiveness

Key issues in Finland

- *main emphasis of the regulatory body must be in safety, not in formal fulfilment of written rules*
- *management of the regulatory body must have an authority and and ability to set correct priorities*
- *staff must have professional competence, which involves both analytical skills and practical know-ledge on nuclear facilities and on management of their operation*

Regulatory effectiveness

Key issues in Finland (cont.)

- *the regulatory body must have trust by the political leadership and by the general public*

Prerequisites for regulatory effectiveness

Advanced management system of regulatory body

- *strategic planning***
- *setting performance goals***
- *reporting and assessing
performance***
- *indicators***
- *internal Quality System***

Cornerstones of regulatory effectiveness

Management of the regulatory body has adequate understanding on the importance and priority of various issues.

An ability to identify and raise relevant safety issues is necessary even if these

- are not covered by existing rules nor***
- incorporated into the existing risk models.***

Cornerstones of regulatory effectiveness (cont.)

Regulatory staff has collective in-depth knowledge on

- all technical fields relevant to nuclear safety and***
- all safety aspects of design and operation of each NPP***

All members of regulatory staff are expected to have both analytical skills and practical acquaintance with the NPP's and their operation. Therefore, most of STUK staff are doing

- safety assessment***
- on-site inspections***
- supervision of safety research***
- preparation of regulatory guides***

Safety Culture

• "the phrase has been over-used and might have lost its meaning and impact"

Challenges

• the definition (agreeing on what constitutes a good safety culture and how to develop one)

• how to measure safety culture

• the relationship between organisational and human behaviour and nuclear safety

How to measure safety culture?

- ***Behavioral measures***

- ***based on a series of observations or evaluations over a period of time***
- ***risks of biased observation or distortion of behavior***

- ***Attitudinal measures (surveys)***

- ***should involve also interviewing of small groups of employees***
- ***not appropriate for use by a regulatory body (to assess utilities)***

How to measure safety culture? (cont.)

• *Finding tangible evidence or incipient weakness of safety culture*

- *a useful approach is to search for real events where decisions were taken under difficult circumstances***
- *recognition of early signs of deteriorating performance***
 - *team inspections***
 - *assessment of incidents***
 - *indicators***

Quality System of STUK Observations

- *The Quality System is a useful tool for managing people and working processes.*
- *The Quality System forms a basis for a systematic development of our working processes and performance.*
- *Measurement and assessment of STUK performance have been improved through applying the Quality System.*
- *Common understanding of our goals and working processes has improved*
- *Transparency of regulatory work has been improved by delivering internal guides to the utilities for information*