



# **RIC 2004**

## **Safety Conscious Work Environment, Session T5**

**Management of Safety – Good Working Environments**

**Christer Viktorsson**

**Deputy Director General**

**Swedish Nuclear Power Inspectorate**

**March 11, 2004**

# Content

- Introduction
- Safety Conscious Work Environment (SCWE)
  - General
  - Swedish situation
- Management of Safety – SKI Approach
- Conclusions

# Safety Conscious Work Environment

## Important discussion in the US

- Open atmosphere in the work place supports good safety culture
- Good working conditions normally promotes safety
- Difficult issue and hard to regulate (Flexibility)
- NRC Policy statement points to important aspects of licensee and employee responsibility, such as
  - Licensees to establish safety-conscious environments supporting safety - safety management obligation
  - Employees to raise safety concerns directly with the licensee - good safety culture obligation
  - Discussion on-going should put focus on the importance of the matter to the benefit also of the international community

# The Swedish situation

- No specific regulation by SKI, but regulated in general sense in other legal acts/agreements. SKI has addressed the issue implicitly (“Licensee shall ensure that the personnel is provided with the necessary conditions to carry out work in a safe manner”)
- Employer – employee relationship (agreement, laws) normally means loyalty with the employer. Licensee should expect from the employees to raise concerns directly to him, in particular if he depends on a license for his company from the authority in question
- However, practice has shown that existing arrangements do not prevent an employee to complain to an oversight authority in case safety is concerned. (Court cases)

# Management of Safety – SKI Principles

- Creating Good Working Conditions – SKI’s Eight Principles (Part of SKI’s Safety Regulation)
  - Establishment of guidelines for safety and make them known to personnel (policy and goals)
  - Quality management system to support safety
  - Adequate examination and consultation before safety related decisions are made
  - Adequate personnel is available with necessary competence (also for years to come)
  - Responsibilities and authority are defined and documented
  - Personnel is provided with necessary conditions to carry out work in a safe manner
  - Experience is utilised and communicated to concerned personnel, continuous evaluation needed
  - Ensure safety is maintained and continuously developed

# Management of Safety – MTO Approach

## Man – Technology – Organisation (MTO) Concept

- Interplay between humans, technology and organisation. Depart from knowledge of factors influencing the ability to work safely. Seven behavioural scientists employed by SKI
  - Study the conditions given to persons to work safely (plant modifications)
  - In charge of our oversight of competence and resource requirements
  - Analyse management and organisational aspects of safe work, as notified to SKI by licensees
  - Analyse events in order to prevent reoccurrence, i.e. learning from experience

# Management of Safety – MTO Approach 2

## Application of MTO Examples:

- Assessing modifications to evaluate from users perspective
- Inspecting maintenance from organisational perspective
- Developing and evaluating procedures
- Leadership influence on safety culture

# Management of Safety – Studies by SKI

## **SKI is presently studying (with the licensees)**

- Which are the important characteristics of good safety culture
- Possible indications of deficiencies in safety culture
- Good Safety management is to create a culture where a group of individuals shows a behaviour based on their common belief in the importance of safety
  - communicated by management
  - made visible by safe behaviour of frontline staff
  - promotes attention to safe work environment and questioning attitudes



# Conclusions on SCWE

## Important to discuss the matter further

- SKI regulation focuses on safety management as a driver for good safety culture. Common characteristics of good safety management (style, shared values, skills, staff, systems, supervision and strategy)
- MTO - Concept found useful by SKI and licensees in Sweden to contribute to safety
- Further studies of factors influencing safety management and safety culture are needed
- Safety goes well with business