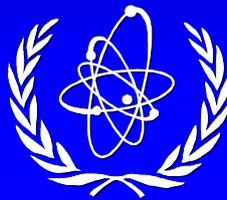# Organizational and Safety Culture in Decommissioning
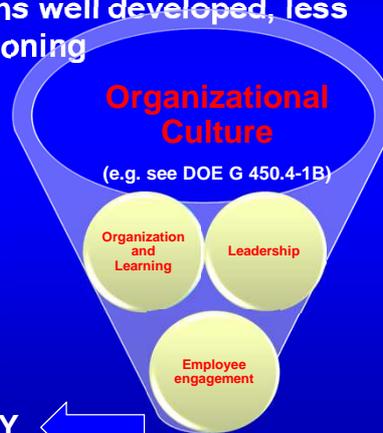
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Overview

- **Definitions: Organizational and Safety Culture**
- **Decommissioning different to operations**
- **Human factors in operations well developed, less developed for decommissioning**
- **To develop practices and tools to help project managers retain focus on human factors**

Organizational Culture

(e.g. see DOE G 450.4-1B)

Organization and Learning

Leadership

Employee engagement

SAFETY

Organizational Culture defined

"A pattern of basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore is to be taught to new members as the correct way to perceive, think, and feel in relation to those problems."
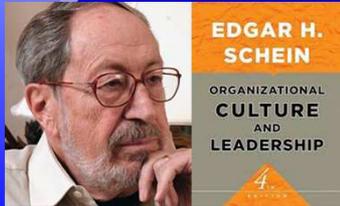
Organizational Culture

- It's real and tangible
- Multi-faceted: You can see it, touch it
- Shaped by leaders and workforce, it's a group dynamic
- How it feels to be at work and how we do work
- Positive AND Negative

- A combination of the *intended* (the formal organization) and the *unintended* (the informal organization)

- Reflected in:
  - Physical Environment
  - Business Practices
  - People, more than anything else

Leadership: most influential component of any organizations' culture

Leadership means influencing people by providing purpose, direction, and motivation to accomplish a task.

● Purpose- Gives employees a reason to accomplish the mission.

● Direction- Gives them the guidance to accomplish the mission.

● Motivation- Motivation gives them the will to accomplish the mission (*a potential problem in decommissioning*).

Leaders must <u>interact</u> and <u>communicate</u> with their subordinates.

Introduction to safety culture

● **The most effective way to improve safety in an organization is to embed safety into its (organizational) culture**

● **Everything else is treating the symptoms**

What is Safety Culture?

- **Safety Culture is part of the wider Organizational Culture**
- **Fundamentally, it is the values and behaviours in an organisation and its members that make safety the overriding priority**
- **Safety Culture is based on a shared belief system where safety is integral to every part of the organization.**
- **A goal that sometimes competes with an organization's primary mission**

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"How can you say we're not behaving like a team? We're all wearing the same color shirts, aren't we?"

Examples of a Strong Safety Culture

There are a number of behaviours which are typical of a strong Safety Culture – the following are examples;

- **Everyone feel personally responsible for safety**
- **Leaders demonstrate their commitment to safety**
- **Trust permeates the organization**
- **A Questioning attitude is cultivated**
- **Open reporting of problems and errors without blame**

And, crucially, **good operating performance**

Credit of UK's

ociety for Radiological Protection

www.srp-uk.org

Regulators

- Regulators are a critical stakeholder group
- Inspectors have a powerful opportunity to offer support and encouragement for developing an effective safety culture.

Learning from experience

- A true learning organisation is a major attribute of a good culture.
- Without it we are destined to repeat the mistakes and ignore the successes of the past
- Effective Operational Experience Feedback (OEF) is therefore critical
- This can be challenging, particularly if there are local sensitivities over releasing information or a perceived risk of litigation

EXPERIENCE IS THE WONDERFUL KNOWLEDGE THAT ENABLES YOU TO RECOGNIZE A MISTAKE WHEN YOU MAKE IT AGAIN

Decommissioning vs. Operations

- **Different sets of activities in decommissioning**
- **Some risks removed**
  - **E.g. nuclear material leaves site prior to decommissioning**
- **New risks introduced**
  - **Industrial vs radiological risk**
  - **Increased use of contractors**
  - **Communications with regulators, contractors, IAEA, waste managers etc.**
  - **Evolving, first-of-a-kind tasks, may be novel so no procedure at hand**
  - **Significant organisational change**
  - **Sharing lessons between decommissioning sites, maintaining the knowledge base**
  - **Managing and maintaining the organizational / safety culture**
  - **Complacency, alertness, readiness**
  - **Uncertainties**
  - **Motivation (the "working-yourself-out-of-a-job" syndrome)**

11

Human Factors Integration

- **Well-defined concept**
- **Extensively used in military and aviation**
- **Become more widely considered in other industries**
- **Traditionally involves consideration of:**
  - **System Safety**
  - **Staffing**
  - **Personnel**
  - **Training**
  - **Human Factors Engineering**
  - **Working Environment**
- **Strong on engineering focus (e.g. ergonomics), less strong on organisational changes & softer issues**

12

The pillars of safety culture

- We are all <u>involved</u> with safety.

- Management <u>recognizes</u> positive safety activities.

- Management visibly <u>participates</u> in safety programs and <u>models</u> safe behavior.

- We are all <u>accountable</u> for safety.

- We <u>support each other</u> for safety.

- <u>Off-the-job safety</u> is promoted.

- We are all <u>committed to the well being</u> of co-workers and the organization as a whole.

- <u>Keep momentum: a problem in deferral of decommissioning and loss of expertise</u>

13

Safety culture in decom; examples

The BAD side
- Management never go onto the plant (do they mean *me*?)
- Say one thing, do another (surely not!)
- Hire and fire
- Secretive
- Treat the employees as a *hazard*

The GOOD side
- Open (and *brave*)
- Transparent
- "Management by walkabout"
- <u>Long term employment</u>
- Lead by example
- Engage employees in delivering safety and performance; the employee as a *benefit to the organisation and to himself*

A Continuous Journey: Never Become Complacent with Safety Culture (Especially in Decommissioning). The cartoon above shows an attitude ultimately inimical to safety

15

Why Do We Care?

- **Safety culture affects safety performance**
  - ➤ **injury rates**
  - ➤ **accident rates**
  - ➤ **near-misses (indicative of prospective injuries and accidents)**

16

WHY IS SAFETY CULTURE IMPORTANT TO THE REGULATOR?

- **Operating experience has demonstrated nexus between safety culture and events**

- **Safety culture contributes to the safe and secure use of radioactive materials**

- **Licensees bear the primary responsibility for the safe and secure use of nuclear materials, while the regulator must consider the importance of safety culture in its oversight programs**

17

Final Thoughts

- **Concept of safety culture spans across industries and countries**

- **Safety culture has contributed to many well known events (historical & current)**

- **Field is evolving**

- **Continuing education and outreach efforts**

- **INSTITUTE OF NUCLEAR POWER OPERATIONS (INPO)** - Principles For Strong Nuclear Safety Culture **(Nov 2004)**

- **IAEA INTERNATIONAL NUCLEAR SAFETY ADVISORY GROUP (INSAG) number 15,** Key Practical Issues in Strengthening Safety Culture**, (September 2002)**

- **U.S. NUCLEAR REGULATORY COMMISSION (NRC)** Development of a Nuclear Safety Culture - Final Safety Culture Policy Statement **(*NRC-2010-0282*).**

- **IAEA** Safety Culture in Nuclear Installations Guidance for Use in the Enhancement of Safety Culture **IAEA-TECDOC-1329(Dec 2002)**

- **IAEA** Management of Human Resources during Decommissioning with a Focus on Motivation Aspects **(in preparation)**

19

Many thanks for your attention!!!!!

20