

How Much Do We Understand About the Role of Organizational Safety Culture in the Fukushima Nuclear Accident?

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Why Are We Here?

“The one theme that runs through the conclusions we have reached is that the principal deficiencies in commercial reactor safety today are not hardware problems, they are management problems.”

Three Mile Island
A Report to the Commissioners
and the Public, January 1980

What is Organizational Safety Culture?

- ▶ Safety Culture is defined by DOE as:

“An organization’s values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment”

(EFCOG/DOE ISMS Safety Culture Task Team Final Report , 2010)

- ▶ Safety culture exists in an organizational context.

What is Organizational Safety Culture?

- ▶ Organizational Safety Culture refers to the characteristics of the work environment, such as the values, rules, and common understandings that influence employees' *perceptions* and *attitudes* about the importance that the organization places on *safety*.
- ▶ Behavior reflects the perceptions, attitudes and values.
- ▶ Behavior is observable and measurable.

Why is it important?

- ▶ Behavior drives performance in a facility.
- ▶ The organizational cultural context drives the values, attitudes and common understandings that drive behavior.
- ▶ Organizational Safety Culture is driven by the basic assumptions that individuals believe are expected and rewarded in the organization.

What do we know?

- ▶ Facts and lessons learned with respect to the technical aspects of the accident.
- ▶ Some references to organizational behavior appears in several reports from a variety of sources and from media information.
- ▶ June 2012 – The National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission (NAIIC).

What do we know?

“What must be admitted – very painfully - is that this was a disaster ‘Made in Japan’. Its fundamental causes are to be found in the ingrained conventions of Japanese culture: our reflexive obedience; our reluctance to question authority; our devotion to ‘sticking with the program’; our groupism; and our insularity.”

Message from NAIIC Chairman Kiyoshi Kurokawa

What do we know?

- ▶ Nuclear power was embraced as a policy goal and pursued with determination.
- ▶ Its regulation was entrusted to the same government bureaucracy responsible for its promotion.
- ▶ The interests of the organization were put ahead of their duty to protect public safety.
- ▶ Mindset managed to avoid lessons learned from Three Mile Island and Chernobyl , resisted regulatory pressure, and covered up small scale accidents.

What do we know?

- ▶ There were issues in:
 - ▶ Communication
 - ▶ Formalization
 - ▶ Training
 - ▶ Emergency Preparation
 - ▶ Roles and Responsibilities
 - ▶ Organizational Learning
 - ▶ Decision Making
- ▶ Strategic Thinking
- ▶ Risk Management
- ▶ Independent Oversight
- ▶ Prioritization
- ▶ Resource Allocation
- ▶ Trust

What don't we know?

- ▶ We need to try to understand the perceptions and attitudes of those involved with the accident.
- ▶ We need to know those attitudes to understand the values that drove the behavior that drove performance before, during and after the accident.
- ▶ We need to know what is driving behavior now and if it is different and how is it different.

How do we find out?

- ▶ The NAIIC report is a good starting point.
- ▶ There needs to be a more systematic and objective way to understand the perceptions, attitudes and values of those involved. Some efforts are under consideration.
- ▶ There needs to be engagement of the individuals from all organizations to understand not any one organizational safety culture but all organizational safety cultures that contributed to the accident.

What do we do with the information?

- ▶ Even with the issues already identified by the NAIIC Report it is clear that these problems are not unique to the Fukushima Nuclear Accident.
- ▶ The lessons learned are critical because their application is important not just for the nuclear industry but for all industries that can impact worker and public health and safety.

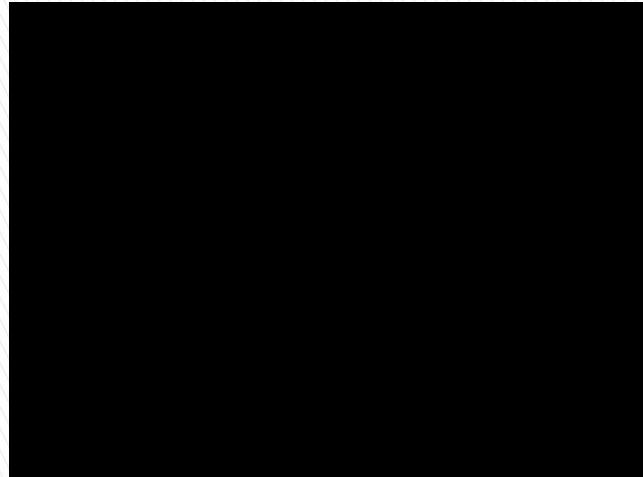
What can we do now?

- ▶ Ask the question, **What if?**
- ▶ If we can't ask that question it may be because we can't challenge management, don't question authority, we are overconfident, we feel time and schedule pressures, we think we are alone.....
- ▶ If we can ask the question then we are aggressively seeking to know what we don't know, to have a questioning attitude, an open dialogue, considering long term versus just short term consequence....

What can we do now?

What if we don't ask the question?

Dare to Disagree



Safety Culture Session: Roundtable Discussion

- ▶ What Do We Still Want to Know About Safety Culture in the Post-Fukushima World?