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From Safety Culture to Culture for Safety - What is it that we Still Haven't Learned

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Synopsis

In April 1986 the Chernobyl Accident happened. Several years later in 1991 the IAEA Independent Nuclear Safety Advisory Group published INSAG 4 and the concept of safety culture was defined for the nuclear community because of its relationship to the accident. Where the Three Mile Island Accident in 1979 had brought human factors issues in procedure development, human performance, and training to light, the Chernobyl Accident was discussed in terms of management, supervision, and safety culture. Work in the nuclear community evolved around the concept of safety culture although a clear understanding of what was actually meant was often missing. Methods to evaluate and assess safety culture were developed and efforts to integrate the findings of those evaluations into more traditional nuclear tools, such as probabilistic risk/safety assessment were attempted as well. Safety culture became thought of as a process that could be written into a procedure, measured by performance indicators and fixed in a corrective action program. The changes that organizations saw as a function of their safety culture improvement programs though were often just changes in some behaviors. Short term improvements in safety performance and the metrics to measure them were observed and many concluded they had really changed their safety culture. The changes were often not sustainable. The efforts did not include an in depth understanding of why individuals thought or behaved in the way that they did.

In March 2011 the Fukushima Daiichi Accident happened. Initially it was accepted to explain it as a natural disaster. While the earthquake or the tsunami could not be prevented, there were things that could have been done before, during and immediately after the natural phenomena that would have helped to mitigate the consequences of the accident. The IAEA conducted an in-depth analysis of the human and organizational factors of that accident and drew a number of conclusions but none so critical as the finding that while the same natural phenomena might not occur in every nuclear facility location around the world, the same human and organizational issues could. What is taken for granted and what is assumed represents culture and will influence behaviors, decisions, and what is attended to. This paper will discuss what is needed for the nuclear community to move forward now in the way it thinks about safety culture. By thinking about culture as the foundation for the shared beliefs and values in any organization the realization that improvement programs will not succeed with short term efforts but rather will require time and commitment, will be evident. By working within the organizational culture to achieve and maintain safety performance a more realistic and sustainable outcome will result. It is time 30 years after the Chernobyl Accident to shift the thinking in the nuclear community from safety culture to culture for safety. It is the necessary step for each organization to try to move forward to achieve long term sustainable safety performance.

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