

**International Conference on Occupational Radiation Protection:  
Strengthening Radiation Protection of Workers –Twenty Years of Progress  
and the Way Forward**

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## **Nuclear Industry Experiences in Occupational Exposure**

The international nuclear industry has for many years had an impressive record of controlling and reducing occupational exposure, as measured by average individual exposure and collective dose. Current average worker doses are around 1 mSv per year for the whole nuclear fuel cycle, which is within the variability of natural background radiation. We hope for regulatory acknowledgement of this success through less pressure for formal optimisation assessments on our occupational exposures where the doses are already very low.

The industry is committed to maintaining the highest performance standards for occupational exposure. Our improvement processes focus on learning from peers and on improving and developing our overall safety culture. We expect our improvement plans to be based on demonstration of clear defined value benefits, and we must not move towards 'minimisation' of exposure.

It is important to ensure that we take an 'all hazards' approach to occupational safety. Radiation is just one of several hazards that face our workforces, and keeping risks in perspective is what industry does well. Over-prioritising the radiation risk would send mixed messages and reinforce the perception that low radiation levels are particularly dangerous.

Our experience shows that successful optimisation of occupational exposure depends on many factors, but developing a strong radiation protection culture as part of an overall safety culture is foundational to success. An organization with a strong safety culture will have a management that supports the development of technical excellence and a robust monitoring program along with a drive for continual improvement. At the individual worker level a sound culture recognises that knowledgeable and skilled workers can optimise how they complete their tasks.

In addition to the cultural approaches, optimisation comes from having technical competence and a high-level understanding of all processes.

In order to maintain this impressive record, there are several key future challenges for occupational exposure within the industry.

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