

**International Conference on Occupational Radiation Protection:
Enhancing the Protection of Workers - Gaps,
Challenges and Developments**

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Session 6

Summary of contributed papers

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Contributed papers

- Five contributed papers:
 - *Orion et al.* (Israel)
 - *Ozil et al.* (France)
 - *Lima et al.* (Brazil)
 - *Lin et al.* (China)
 - *Kalashnikova* (Ukraine)

Topics addressed

- Personal protective equipment
- Retrospective dose reconstruction in case of a localized radiation injury
- Assessment of potential and actual working conditions as a basis for planning and implementing measures to protect workers and emergency workers

Orion et al. (Israel)

- Novel device for shielding pelvic bone marrow from exposure to gamma radiation
 - To protect volume of bone marrow sufficient for hematopoietic reconstitution
 - To prevent lethal acute radiation syndrome even at very high radiation doses (> 9 Gy)

Ozil et al. (France)

- Ventilated pressurized personal protective equipment against EC89/686
 - Improved performance:
 - Full body protection against skin contamination
 - Protection against inhalation
 - Heat stress removal

Lima et al. (Brazil)

- State of the art reconstructive dosimetry in case of a localized radiation injury
 - In comparison to doses based on clinical observations
 - Visual Monte Carlo calculation program suitability for estimating the distribution of doses to the hand
 - Possible use to promptly estimate doses in an emergency situation as an input into necessary medical attention

Lin et al. (China)

- Assessment of potential working environment in the safety building and the main control room of a NPP under accident conditions
 - To identify necessary safety measures to be implemented in the design
 - Goal: to ensure a habitability of these facilities under accident conditions

Kalashnikova (Ukraine)

- Strategy for ensuring radiation protection and safety of workers undertaking recovery work in degraded radioactive waste storage facility
 - Extensive survey of hazardous conditions at the legacy site
 - Detailed planning of work which allows for adequate protection of recovery workers
 - As for planned exposure situations

Conclusions (1)

- Proper consideration of the anticipated hazardous conditions in which emergency work and recovery work may be undertaken can provide useful insights into measures that need to be implemented for protecting emergency workers and recovery workers

Conclusions (2)

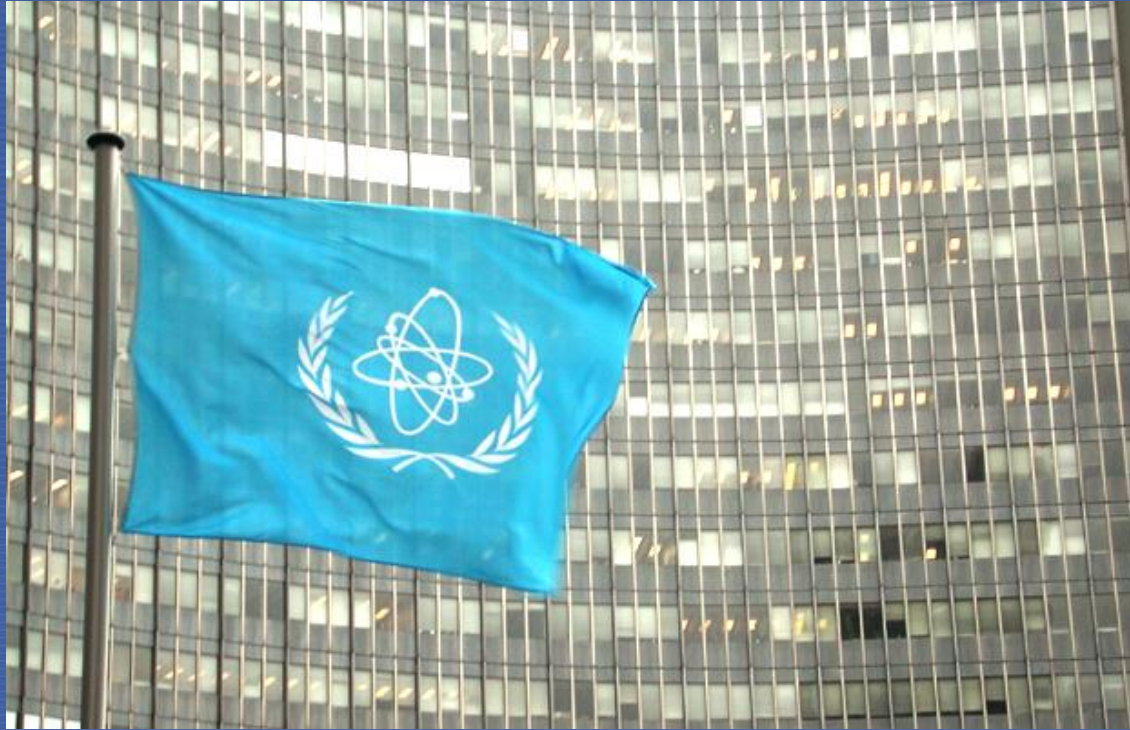
- Situations that do not require urgent decision-making allow for:
 - Detailed planning of the recovery work possible and essential
 - Application of more stringent requirements for occupational radiation protection as for a planned exposure situation can be met

Conclusions (3)

- Proper personal protective equipment is available and can be selected to meet the expected conditions in which emergency work or recovery work is to be undertaken
 - Protection against both radiological and non-radiological hazards
 - Site related
 - PPE related
 - Could be life-saving

Conclusions (4)

- Prompt estimation of doses incurred in an emergency is essential in terms of identifying the need for the necessary medical attention
- Example computational code – Visual Monte Carlo – has been demonstrated as useful in prompt estimation of doses in a radiation emergency and is readily available



Thank you for your attention...