International Experts Meeting on

Decommissioning and Remediation After a Nuclear Accident

IAEA Headquarters, Vienna, Austria

28 January to 1 February, 2013

Sessions III-B and IV-B

Summary of Findings and Recommendations

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Points to Address

- Session theme - “Challenges in Planning and Implementation of Decommissioning”
  - All (100%) invited speakers and oral poster presenters took part in the sessions III-B and IV-B
  - All presentations were of good quality and contained well selected and problem-focused information & conclusions. Up-to-date information on Fukushima situation is extremely valuable.
  - Optimal balance of technical, managerial and regulatory issues presented for the problem under discussion
  - Oral presentation of relevant posters was efficient and provided additional useful information on the topic.

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Points to Address

- Key issues identified and lessons learned (include general discussions, panels, posters)
  - After the serious accident MSs should develop Decommissioning plan / concept as soon as practicable (but mitigation/emergency plan comes first)
  - Accident clean-up management is unique (depends on contamination level, case and site specific, etc.). Protection measures should not destroy natural environment.
  - For the case of serious (beyond design basis) accident with off site effects a national “framework” for mitigation, clean-up, waste management & decommissioning should be developed

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Points to Address

- Key issues identified and lessons learned – cont.
  - Several papers considered the need for integration of Decommissioning and WM programs taking into account recycling and clearance of materials in question

For the Fukushima Daiichi case Dr. Suzuki put it as follows:

- For Fukushima Daiichi a specific waste management strategy is needed. It has to be regarded as a key principle in designing decommissioning procedures.
- The waste management strategy should include not only long-term storage but also re-using and recycling of materials. The facility and site plans should be established considering their prioritization.
- Precise estimation of the future waste generation is important in long-term decommissioning planning. Close communication between decommissioning process management – and waste management – teams is indispensable.

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Points to Address

- Key issues identified and lessons learned – cont.
  - Immediately after the accident the knowledge on situation and plant/facility conditions is limited. Proper radiological characterization is essential for planning, control of waste volumes and decommissioning cost.
  - Delay in decommissioning may be very costly due to possible loss of information, degradation of structures and materials, loss of human expertise etc. At the same time prompt clean up and decommissioning may result in high collective doses and increase in waste volumes. Measures should be taken to avoid multiple waste storage sites. For the large decommissioning projects the US pragmatic approach (on-site disposal, entombments etc.) should be considered.

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Points to Address

- Key issues identified and lessons learned – cont.
  - Organizational and managerial issues were identified as a need in establishing the ready-to-act and stress-resistant executive Committee with clear task to gain control on accident and organize and implement prompt response and countermeasures needed (+ CODIRPA experience).
  - There was a clear signal for R&D needs in case of unique situation on nuclear installation to be decommissioned (Windscale) or, as an example, in case of difficulties which prevent any access to radioactive material or fuel to be handled or removed (Fukushima). In many decommissioning cases it could and should be found a proper proportion between proven technologies and innovative approach and instrumentation (robotics, 3D modelling, characterization,etc.).

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Points to Address

- Recommendations for strengthening international cooperation
  - The general discussion of serious events and consequences shows that all post-accident issues were or are connected with obsolete (e.g. ex-military) or currently employed nuclear technologies and no attention is paid to emerging or innovative ones (e.g. innovative reactor concepts, advanced fuels, new reprocessing technologies). We are “analyzing the past wars”, and not preparing for the future challenges.
  - So the projected or planned future nuclear plants / facilities should be assessed with involvement of international community from the point of additional or unpredictable risks and specific consequences in case of beyond design basis accidents.

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Thanks a lot for Your Participation, Valuable Inputs and Attention

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