

International Experts Meeting on
Decommissioning and Remediation After a Nuclear Accident
IAEA Headquarters, Vienna, Austria
28 January to 1 February, 2013

Challenges in Decommissioning and Remediation
Session III-A Remediation Challenges and Determination of
End States

Session IV-A Case Studies for Remediation
Summary of Findings and Recommendations

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Session content - general

- Session III-A
 - 4 full-scope presentations
 - 8 oral presentations of posters
 - General discussion
- Session IV-A
 - 7 full-scope presentations
 - Discussion on challenges for implementation of remediation measures, including R&D needs
- All presentations were informative and well-prepared, discussions were open-minded and constructive



Session content – cases considered

- Chernobyl accident
- Fukushima-1 accident
- Goiania accident
- Palomares accident
- East Urals Radioactive Trace
- Nuclear legacy cases, including former defense nuclear facilities



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Session content – issues covered

- Regulatory framework for remediation
- Decision making, including role of stakeholders
- Site and exposure scenario characterization
- Assessment of radiological impact and dose estimation
- Remediation strategies and end-points, including in-situ decommissioning
- Recovery Handbooks
- International cooperation
- Human dimension of remediation
- Scientific aspects



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Key issues identified and lessons learned

- Emergency preparedness does not mean remediation preparedness
- Decision making process appears to be a weak link in many cases, particularly due to uncertainty of roles of main actors, including regulator, in transition from accident management to remediation
- Public communication concerning remediation, especially communication with residents of contaminated territories, is to be improved



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Key issues identified and lessons learned

- Residents of contaminated territories should be treated personally:
 - importance of distribution of personal dosimeters asap
 - contribution of individual behaviour and habits should be identified and clearly communicated asap
 - development of practical radiation protection culture to be put on agenda
- Remediation is to be people/doses driven – concentration not on contamination but on health effects



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Key issues identified and lessons learned

- Remediation should not be considered as clean-up only – use of other methods could be more beneficial
- Clear policies and strategies are to be developed at the initial stage of remediation
- Development of Recovery Handbooks (European projects) and further development of complementary tools was considered valuable and purposeful



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Observations pertaining to application of standards and criteria

- The lack of guidance covering transition from accident management to remediation and remediation itself was generally recognized
- Elaborated provisions concerning remediation in BSS-2012 should be complemented with further guidelines
- Guidelines for Remediation Strategies (TRS # 475) were considered a good example



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Recommendations for strengthening international cooperation

- International guidance documents needed for the following issues:
 - Transition from emergency management (emergency exposure situation) to remediation (existing exposure situation)
 - Selection of appropriate reference levels for typical exposure conditions
- International cooperation on different aspects of remediation of nuclear legacy sites should continue and be strengthened



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Recommendations for strengthening international cooperation

- Value of the IAEA International Forum on the Regulatory Supervision of the Nuclear Legacy Sites was recognized and appreciated
- Lessons already learned from remediation activities following major accidents and concerning nuclear legacy sites should be further scrutinized under the IAEA umbrella in order to develop standards of remediation preparedness and identify relevant key issues and best practices



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Considerations for IEM report

- Main areas for improvements concerning remediation are as follows:
 - While emergency preparedness was given proper attention, preparedness for remediation is not considered as a part of it
 - Guidance documents should be developed for remediation, including human factor considerations
- Lessons learnt from different remediation cases up to now could create a good basis for further improvements