

Decommissioning of Nuclear Facilities - Conclusions and Recommendations -



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- IAEA -

**R²D²Project: Workshop on 'Decommissioning
Technologies'**

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Main Issues

- Importance of applying the proper of activities in clearance (existing information; screening; sampling with an appropriate plan to establish radionuclide relationships; final release measurement)
- Apply tested equipment, particularly in areas with remote control
- Apply an integrated approach between dismantling / dismantling technology, processing of waste, and release of materials, buildings and sites from nuclear regulatory control
- Apply and disseminate at home the knowledge received at this workshop

Comments on the workshop (I)

- Experienced and qualified speakers
- Theoretical lectures were followed by a practical demonstration / Demonstrations were very helpful
- Core removal was missing in the workshop agenda (because it had already been finished)
- Information on clearance was very useful
- Remote controlled decommissioning activities and their testing on mock-ups were very valuable as they contribute to achieving a high level of protection (radiological, conventional, ...)
- Techniques and technologies of decommissioning covered all aspects of the decommissioning a nuclear facility



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Comments on the workshop (II)

- Comprehensive presentations on technologies gave a clearer view on technologies needed
- Insight into advantages and disadvantages of technologies was important
- The independent expert organisation of regulatory bodies (TÜV) was seen as being very valuable in licensing and supervision
- A broader scope of technological demonstrations would have been appreciated with less focus on German technology
- More information on costs would have been appreciated to satisfy clarity on costs

Comments on the workshop (III)

- Information on precautions and the protection of people was very useful
- Uniform national reporting and peer review of national reports were very much appreciated
- The host organisation did a good job (WS agenda / organisation, presentations and execution of WS)
- Time for discussions / visits was too short due to logistical constraints, in particular during working group presentation, conclusions and recommendation
- It would have been useful if representatives from the regulatory body had been included in the workshop in order to share their experience



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Comments on the workshop (VI)

- It would have been better to have more time for visits to facilities. A two weeks workshop would have been more appropriate
- The IAEA representatives should have taken back and given the speakers more opportunities to answer and explain questions raised by participants.
- It was felt to be important to stay in bilateral contacts with the Technical Support Organisations
- WAK / KIT is happy to provide help and also train experts on the job, if necessary

New and useful information

- The importance of contractors was recognised
- Long lasting experience in using mobile facilities
- Use of standard / commercial equipment of appropriate quality adapted to a specific application
- Experiencing the testing of equipment in a mock-up was very important
- Practice on contamination surfaces and demonstration practices were very valuable in understanding the decommissioning process
- Useful lesson that University participates in the decommissioning process, e.g. through developing new technologies and cold tests of real facilities

Situation in participating Countries

- Some participating countries still have a confusion in the meaning of ‘independent regulatory body’
- Some countries still cannot explain the action taken towards the ‘independent regulatory body’



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Suggestions to partic. Countries

- Techniques and demonstrations are very important for progress in the decommissioning of facilities
- Send the same experts to R2D2P workshops
- Strengthen the role of these experts as ‘multipliers’ so that they share the information gathered in the workshops with other colleges involved in the decommissioning process
- Take action on ensuring the independence of the regulatory body, if it is not yet given
- Be fully prepared and take serious attention in preparing the national report to be presented at the next workshop

Suggestions to the IAEA

- Consider organising a ‘summer school’ on decommissioning
- Providing of training on characterisation, sampling, release measurements would be desirable
- Development of the technologies and methodologies and their practical application could be the target for another workshop

Difficult issues (I)

- Imposing some of the regulations in government owned facilities is often difficult
- Achieving independence between operator and regulator in the case of government operations
- Some regulators have difficulties in imposing decommissioning requirements on operators because of an 'inferiority complex' due to the fact that operators were established much earlier and had more experienced staff
- As only limited cost information was provided during the workshop it is difficult for participating countries to assess their decommissioning costs



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Difficult issues (II)

- The German technology may be inaccessible to participating countries because of high costs for equipment and contractors
- Limited cost information was provided during the workshop. Therefore it is difficult for participating countries to assess the costs for decommissioning technologies

How to proceed

- Continue to include practical activities in future WSs
- Next WS should be on 'safety assessment'
- Explore the opportunity of holding a workshop on release of buildings and sites (Dresden/Rossendorf; April / May 2010)
- Try to avoid that visa problems occur again

Conclusions

- The workshop on demonstration of decommissioning techniques was very successful because the organisation and agenda covered the expectations of participants
- The workshop agenda complied with expectations
- Focus on practical activities should be kept in future WSs