IAEA Technical Meeting: "Annual Forum for Regulators and Operators in the Field of Decommissioning: International Decommissioning Network (IDN) Activities"

3-7 Nov 2008, IAEA, Vienna

"Other Facilities"

Working Group's Report

IAEA, Vienna
November 03-07, 2008

"Other Facilities Working Group

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2- Canada	– Randy Lovelace
3- Chile	– Azucena Sanhueza
4- Cuba	– Juan Carlos Benitez-Navarro
5- Denmark	– Niels Strufe
6- Germany	– Wolfgang Fasten
7- Russian Federation	– Sergey Mikheykin

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1- "Other (Small) Facilities"

(a) medical facilities with radiography and radiotherapy units and those using radioisotopes for diagnosis and treatment;

(b) industrial facilities, such as those producing radioisotopes, using irradiation and radiography devices, or manufacturing products incorporating radioactive materials, e.g. luminous signs and dials, smoke detectors, lightning conductors and ionizing filaments;

(c) research facilities, such as particle accelerators, and those associated with the nuclear industry, pharmaceutics and medicine;

(d) teaching and research laboratories in universities and schools; and

(e) chemical processing facilities for ores with significant levels of natural radioactivity other than uranium and thorium ores.

2- Identified priorities

1. Facility characterization. Characterization of contaminated surfaces (legacy sites, unknown)
2. Surface decontamination – corroded-degraded
3. Characterization of decommissioning waste (α-β-γ)
4. Management of hazardous/mixed waste
5. Cutting of “Sandwich” structures
6. Design to facilitate decommissioning

3.1- Justification and means for implementation each activity/event

1. Facility characterization. Characterization of contaminated sites & surfaces (legacy sites, unknown)

- **Radiological survey under very limited or complete unknown information of the facility/site**

Problem 1: Characterization of "legacy"/unknown facility/site

Problem 2: Characterization of contaminated surfaces (corroded/penetrated/critical Rn)

Proposed Activities:

- Workshop/ Hands on training
- identify cases of interest
- existing experiences & lessons learned
- solutions, including specific tools

Possible Host country: Canada, Germany, Russian Federation, Chile

3.2- Justification and means for implementation each activity/event

2. Surface decontamination – corroded-degraded

- Troubles in decontamination of corroded/degraded surfaces of "legacy sites", by environmental (atmospheric) effects.
- Carbon steel, stainless steel, concrete, painted surfaces,
- Deep penetration of contamination == need to use more aggressive chemicals/tools == more secondary wastes

Problem: to improve D&D techniques for these cases

Proposed Activities:

- Workshop/ Hands on training
- identify cases of interest
- existing experiences & lessons learned
- solutions, including specific tools

Possible Host country: Russian Federation, Canada, USA ?, France ?

3.3- Justification and means for implementation each activity/event

3. Characterization/measurements of decommissioning waste

- Optimization of waste management,
- Release of low activity material from RC (clearance) as ordinary waste
- Reuse and recycle these material

Problem 1: Comprehensive characterization/measurements of D&D waste packages

(identified in the IAEA action plan for decommissioning)

Proposed Activities:

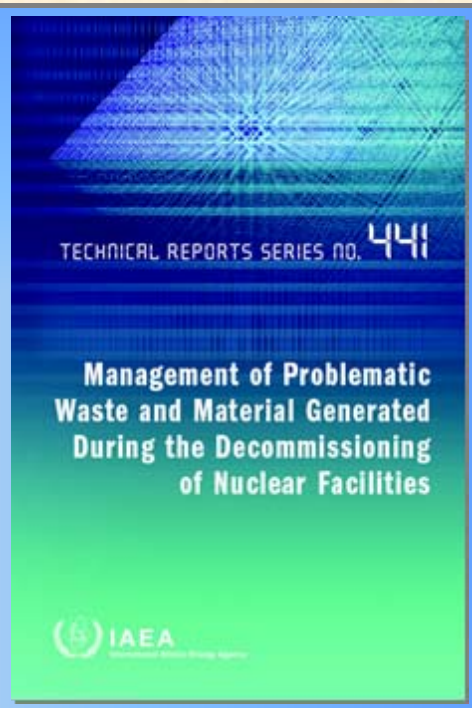
- Expert missions/ Scientific Visit/ Workshop/ Hands on training
- implementation of waste characterization methodology
- provision of specific equipment

Possible Host country: Cuba, Austria, Canada, Germany, Chile

3.4- Justification and means for implementation each activity/event

4. Management of hazardous/mixed waste

- Lead, Mercury, Asbestos



Problem 1: Managing hazardous/mixed wastes

Proposed Activities:

- Workshop/ Hands on training/ Scientific visits
- existing experiences & lessons learned
- solutions, including specific tools

Possible Host country: Denmark

3.5- Justification and means for implementation each activity/event

5. Cutting of "Sandwich" structures

Sandwich structures (e.g. for biological shield in hot cells; submarines, etc.) can include e.g.:

- steel + lead + concrete,
- aluminum + lead + concrete
- aluminum + lead + graphite + steel
- others

Problem: how to cut these structures with different ρ

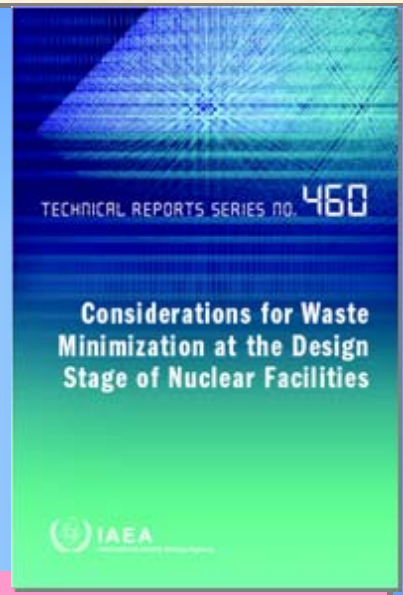
Proposed Activities:

- Workshop/ Hands on training
- identify cases of interest
- existing experiences & lessons learned
- solutions, including specific tools

Possible Host country: Denmark

3.6- Justification and means for implementation each activity/event

6. Design to facilitate decommissioning



- D&D needs should be incorporated at the design stage of new facilities (hot cells, laboratories, centralized processing storage facilities)
- E.g. provision for easy access … to areas and equipment
- E.g. use of non-absorbent work surfaces/flooring…

Problem 1: Incorporate D&D needs during facility design and maintenance

Proposed Activities:

- Workshop/ Hands on training/ Scientific visits
- existing experiences & lessons learned
- solutions, including specific tools

Possible Host country: UK ? Canada

4. Other needs/offers identified

- Need of concrete shaver / grinder








- Offer of decontamination/dismantling tools and equipment:
  - Denmark 2018

Thank you for your attention

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