# Country Group 5 – Rapporteur's Report Germany

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# **Country Group 5**

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 Canada, Finland, Germany, Ireland, Morocco, Norway, Switzerland, Uruguay

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| IAEA Officer: | Mr. Phil Metcalf          |         |
| IAEA Officer: | Mr. Diego Telleira        |         |



#### **Germany - General Observations**

- · Section B: Policies and Practices
  - Assumptions concerning the use of nuclear energy for electricity production in Germany have not been changed
  - The transport of spent fuel to reprocessing plants has been terminated in July 2005
  - The preparation of a German National Waste Management Plan started in December 2001. The Plan is still not published because of the open political questions related to the disposal of radioactive waste and spent fuel.
- Section C: Scope and Applications
  - Wismut AG industrial site wastes were not declared but a special report was prepared
- Section D: Inventories and Lists
  - Updated inventories (2004) given in presentation



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#### **Germany - General Observations (2)**

- Section E: Legislative and Regulatory
  - · Germany has developed legislation on waste clearance
- Section F: Other General Safety Provisions
  - The Plutonium from the reprocessing activities will be processed during the remaining operation time for the NPPs. It is not intended that pure plutonium oxide be disposed of in a repository
  - · Decommissioning:
    - · Legislative framework for decommissioning in place
    - Progress in decommissioning of power reactors, research reactors, and commercial facilities
    - · Several facilities already released from control
- Section G: Safety of Spent Fuel Management
  - The on-site interim storage facilities for spent fuel are in operation or will be in operation at the beginning of 2007
  - Waste from reprocessing to be returned
  - There is enough storage capacity for spent fuel for the remaining operation time of the NPPs



#### **Germany - General Observations (3)**

- Section H: Safety of Radioactive Waste Management
  - The closure of the Research Mine Asse and Repository Morsleben are underway. The procedure for closure follows two different statutes: the mining and the atomic law
  - · The status of Konrad still not finalized
- Section I: Transboundary Movement
- Section J: Disused Sealed Sources
  - Spent sources must be taken back by the manufacturer, importer, or another license holder.



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## **Germany – Highlights**

- Remediation and decommissioning of historical nuclear facilities and sites
- Interim SF Storage Facilities in place
- Decision on immediate closure of the Konrad disposal site



#### **Germany - Overview**

| Type of Liability              | Long-term<br>management policy   | Funding of<br>Liabilities  | Current practice /<br>Facilities  | Planned facilities  |
|--------------------------------|--|----------------------------|---|---|
| Spent fuel                     | Long-term dry<br>storage in<br>containers followed<br>by Direct disposal | Polluter-pays<br>principle | 4 central dry storage<br>facilities, 12 dry<br>storage facilities at<br>the reactor sites | 1 on-site storage<br>facility (Obrigheim)<br>1 repository (status:<br>site selection) |
| Nuclear fuel cycle<br>wastes   | Storage with the objective of deep geological disposal                   | Polluter-pays<br>principle | Conditioning and storage (on-site/off-site facilities)                                    | 1 repository licensed<br>but court procedures<br>ongoing (Konrad)                     |
| Non-power wastes               | Storage with the objective of deep geological disposal                   | Polluter-pays<br>principle | Conditioning and storage (central collecting facilities of the Länder)                    | 1 repository licensed<br>but court procedures<br>ongoing (Konrad)                     |
| Decommissioning<br>liabilities | Greenfield (or unrestricted release from regulatory control)             | Polluter-pays principle    | Normally direct dismantling   | Not relevant  |
| Disused Sealed<br>Sources      | Storage with the objective of deep geological disposal                   | Polluter-pays<br>principle | Storage (central collecting facilities of the <i>Länder</i> )                             | 1 repository licensed<br>but court procedures<br>ongoing (Konrad)                     |



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### Germany - 1st RM Follow-up

- Separation of the role of the applicant from the role of the regulatory body for licencing disposal facilities
  - There is still a requirement to have a clearer separation between the role of the operator of a repository and the supervisory authority
- Increased responsibility of the utilities for final waste disposal
  - · On-going, pending political decisions
- Clear and transparent site selection criteria for final waste disposal facility
  - · Criteria exist, but awaiting Governmental decision
- Clear and transparent criteria to ensure secure funding for decommissioning and disposal
  - Criteria are in place, efforts for improvements are on-going
- Refinancing of the federal regulatory body
  - · No progress made



#### Germany – 1<sup>st</sup> RM Follow-up (2)

- On-going remediation of the Wismut complex (subject to be reported under condition of scope decision)
  - An additional report was added to the National Report for the Second Review Meeting concerning the remediation of the Wismut GmbH. Germany made a comprehensive presentation on the activities of the Wismut GmbH.
- Long-term safety assessment and closure of the Asse and Morsleben disposal sites
  - For both sites long-term safety assessments are in preparation as a basis for safe closure
- The preparation of a German National Waste Management Plan started in December 2001.
  - The Plan is still not published because of the open questions due to the disposal of radioactive waste and spent fuel.



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#### **Germany – Good Practices**

- Sufficient storage capacities for SF and RW
- Storage facilities protected against external events
- The objective of the decommissioning activities is the full dismantling of the facilities to a "green field". "Safe enclosure" is normally not used by private utilities or public entities.
- Good progress on Wismut clean-up project
- Large part of separated Plutonium from the reprocessing activities has already been recycled for MOX fuel. The remaining will be processed during the operation time of the existing NPPs
- Good progress being made on decommissioning of nuclear facilities in general



# Germany - Challenges/Follow-up

- Challenges:
  - Establishment of a clear separation between the role of the operator of a repository and the supervisory authority
  - · To achieve decision on final disposal of SF and RW
  - Achieve public acceptance of a repository by establishing:
    - · clear and transparent site selection criteria and
    - a site selection procedure for disposal of radioactive waste according to the practice in many countries with advanced disposal programs
  - Harmonization of different states' approaches to managing residues
  - Reconsideration of the existing funding system for decommissioning in view of changing conditions in the nuclear power scene

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### Germany - Challenges/Follow-up

#### Follow-up:

- Completion and presentation of the National WM Plan
- · Decision on Konrad repository
- Evaluation of safety aspects of possible disposal sites
- Licence for Morsleben closure
- · Licence to close Asse mine
- Vitrification of HAWC at Karlsruhe
- Clarification/justification of not including
   Wismut project in the JC scope

# Germany – Planned Measures to Improve Safety

 The updating of the German regulations in the area of radioactive waste and spent fuel management taking into account the respective international standards and developments, and following the WENRA process.



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# **Germany - Conclusions**

- National Report demonstrates compliance with the JC
- Clear and comprehensive presentation
- Germany is actively addressing the long term management of spent fuel and radioactive waste

