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NUCLEAR ENERGY AGENCY
RADIOACTIVE WASTE MANAGEMENT COMMITTEE

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WORKING PARTIES' ACCOMPLISHMENTS IN 2006/2007 AND EXPECTATIONS FOR 2007/2008

For each of the three RWMC working parties (IGSC, FSC and WPDD), the document describes the main highlights since the March 2006 meeting of the RWMC (RWMC-39), providing a description of their achievements and an outline of the main expectations for the coming 12-month period.

This document has been revised since the RWMC-40 of March 2007 in light of comments received at the meeting, and further updated by the Secretariat.

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INTEGRATION GROUP FOR THE SAFETY CASE (IGSC)

Accomplishments in 2006/2007 and Expectations for 2007/2008

INTRODUCTION

The IGSC serves as the main technical advisory body to the RWMC on deep geological disposal of long-lived and high-level radioactive waste. The focus of its work is on methodologies and strategies for characterising and evaluating disposal sites as well as on repository design and safety assessment aspects for various waste types. The work activities of the IGSC promote pooling of resources, sharing and synthesis of understanding and experience, and communication of findings to varied audiences. IGSC activities are categorized as follows:

- *Core Activities* promote an integrated safety case and focus on strategic and methodological issues.
- *Technical Activities* enhance the integration of technical and scientific bases in safety cases.
- *Co-operation Projects* are devoted to the further development of specialized scientific or technical issues and are supported directly by those programmes with a specific interest.

Reference Documents

IGSC Foundation Document:	NEA/RWM/IGSC(2000)10
IGSC Mandate:	NEA/RWM/IGSC(2005)6

Core Group Members

IGSC chairperson is Hiroyuki UMEKI (JAEA). Members of the Core Group are: Bruno CAHEN (Andra), Peter DePRETER (ONDRAF/NIRAS), Klaus-Jürgen RÖHLIG (GRS-Köln), Eric SMISTAD (U.S. DOE), and Bo STROMBERG (SKI). Piet Zuidema provides a link to the RWMC Bureau.

HIGHLIGHTS

- International Symposium on the Safety Case (Jan 2007)
- IGSC-8 Meeting (Oct 2006): Topical Session on FEPs; initiate discussion on future program of work

- EBS-4 Workshop (Sept 2006, Tokyo, Japan)
- 16th Clay Club Meeting (Sept 2006, Horonobe, Japan): Topical Session on Progress and Plans in URLs
- Approval of an updated mandate for the Clay Club through 2008
- Reports and products from Timescales Initiative, EBS Project, Sorption Workshop, FEPs Database

PROGRESS/ACCOMPLISHMENTS SINCE RWMC-39 (MARCH 2006)

General

➤ **8th Meeting of the IGSC, Planning for Future Programme of Work**

- Topical session on “National Experience and Practical Application of Methods for Handling FEPs in the Safety Case,” including presentations from Andra, Nagra, SKB, US-DOE, and ASN.
- Special session devoted to a path forward for the future IGSC Programme of Work.
- A task group is conducting interim work to prepare a proposed programme of work for discussion at IGSC-9. Participants include the IGSC Core Group as well as an EC representative, and IGSC member organisations covering a wide range of experiences and programmes.
- Approved new core group members (B. Cahen, Andra; K-J. Röhlig, GRS-Köln; E. Smistad, US-DOE) to replace outgoing members G. Bruno (formerly IRSN), J. Alonso (ENRESA), A. VanLuik (US-DOE).

Core Activities

➤ **International Symposium on the Safety Case**

- NEA, in co-operation with IAEA and EC, hosted the “International Symposium on Safety Cases for Deep Disposal of Radioactive Waste: Where Do We Stand?” in Jan 2007 to highlight practical experience on preparing safety cases and to underline progress since a similar symposium in 1989.
- 150 participants from 16 NEA member countries as well as the IAEA and the Russian Federation.
- Presentations and panel discussions examined evolution of the safety case concept—internationally and in national programmes—and its role in societal dialogue and decision-making. Sessions also highlighted practical experience in developing, implementing, and communicating safety cases in various national programmes and international projects.
- Full programme at www.nea.fr/html/rwm/safety_case/. Proceedings are now in preparation.

➤ **INTERNATIONAL EXPERIENCES IN SAFETY CASES (INTESC)**

The IGSC set up the INTESC initiative following the format of its earlier IPAG exercises. The initiative aims to analyse safety cases existing or under development in order to obtain a clear overview of progress in the last decade and assess best practice in this area.

- In 2006, a detailed questionnaire was distributed; 15 organisations responded, including regulatory agencies. Preliminary results were reported at IGSC-8 and the Safety Case Symposium.
- An INTESC Workshop will take place 2-4 October 2007. Taking the questionnaire results as a starting point, the goal of the workshop will be to reach consensus on findings which can form the foundation for a report (similar to those developed under the IPAG exercises) that will assess

recent progress and include, if possible, recommendations on good practice in the development and presentation of safety cases.

➤ **Handling of Timescales – State-of-the-Art Report**

Processes and events affecting evolution of deep repositories for long-lived radioactive waste are characterised by a wide range of timescales and frequencies. Following an IGSC topical session (2005), a report was envisioned to review the current status on handling timescales; to highlight areas of consensus and points of difference between national programmes; and to determine if there is room to improve methodologies to handle these issues in building and presenting safety cases.

- Implementing organisations, regulators and technical support organisations from 13 countries contributed by responding to a questionnaire and participating in subsequent meetings.
- Taking into account comments from the RWMC at its meeting in March 2006, the final document was approved by the IGSC in October 2006 and is entitled “Consideration of Timescales in Post-Closure Safety of Geological Disposal of Radioactive Waste” NEA/RWM/IGSC(2006)3.
- Release was coordinated with the RWMC-RF LTSC workshop in Nov 2006 on “Regulating for the Long-term Safety of Geologic Disposal of Radioactive Waste: Practical Issues and Challenges”.

➤ **Geosphere Stability of Crystalline Rocks**

To provide assurance of long-term safety of an underground repository, one must argue persuasively that the long-term containment capability of the geosphere and underground environment are “stable” and/or able to buffer natural perturbations.

- A first workshop addressing this question for argillaceous media took place in December 2003.
- Planning has begun for a workshop on crystalline (strong, fractured) rocks in November 2007.

Technical Activities

➤ **4th Engineered Barrier System (EBS) Workshop: Design Confirmation and Demonstration of the EBS in the Safety Case**

The EBS project is a series of workshops intended to improve understanding of how to achieve the integration needed for successful design, construction, testing, modeling, and performance assessment of EBS and to clarify the role that an EBS can play in the overall safety case for a repository.

- Proceedings are in printing for the 3rd EBS workshop (2005) held in La Coruña, Spain, to analyse the role of modelling of EBS in the framework of the safety case.
- The 4th and final EBS workshop planned in the series was held in Tokyo, Japan, in Sept 2006 to address EBS design confirmation and demonstration. Proceedings are in preparation.
 - 47 participants from 13 countries and international organizations attended the workshop.
 - Presentations highlighted examples of EBS testing and demonstration programmes; Working groups discussed feedback to modelling and safety assessment; and design optimization.
- A brochure (2007/2008) will synthesize topics and conclusions of the full EBS workshop series.

➤ **AMIGO Project Workshops**

The AMIGO project (Approaches and Methods for Integrating Geologic Information in the Safety Case) is a series of workshops focused on collection and integration of geologic information (e.g., geophysical, hydrogeological, geochemical, structural) into PA models and the overall Safety Case.

- Proceedings are in final preparation for the 2nd AMIGO workshop (2005 in Toronto, Canada) on linkage of geoscientific evidence supporting the safety case, with emphasis given to the extrapolation of data in time and space. The 3rd (and last) AMIGO workshop will be hosted by Andra in Nancy, France, for April 2008 and a preliminary programme is now available.

- The workshop will focus on “Approaches and Challenges for the Use of Geological Information in the Safety Case” and will emphasize especially the integration and exchange of geoscientific data and information between site characterisation and safety assessment specialists.
- An AMIGO compendium will also document the current state of geoscientific data and its use in safety cases, based on questionnaire responses (2005-6). A preliminary report is expected in 2007.

Co-operative Projects

➤ **Clay Club**

- 16th Clay Club meeting was held Sept 2006 in Japan. A topical session was devoted to Progress and Plans in URLs, including a tour of construction for the planned JAEA Horonobe URL.
- An updated Clay Club mandate through 2008 was approved by IGSC in Oct 2006.
- Next meeting will be coordinated with the Lille international conference on clays, Sept 2007.
- CLAYTRAC project examines natural tracers in geological formations, through detailed re-evaluation and integration of existing measurements (from a variety of formations) and evidence documented in literature. Data collection is complete; a draft report is expected in summer 2007.
- Clay Club endorsed a path forward with a new consultant team to revise, update, and finalise the report on Self-Sealing Properties of Clays, notably taking greater account of empirical data and exploring implications in the specific context of geological disposal. A detailed plan of and a funding request are under consideration by the Clay Club. A final report is expected in 2008.

➤ **Sorption Project**

The Sorption II programme is a benchmarking exercise for modelling approaches used by various organisations to estimate K_d values. Based on standardised reference cases, modelling calculations were performed using different codes, and the results were analysed and compared.

- Proceedings were published in 2006 for the final Sorption II workshop from Oct 2005.
- A new phase of sorption work was approved at IGSC-8, to develop a guidance document on design and application of thermodynamic sorption models in safety assessments and safety cases.
- A kick-off meeting for the new phase is scheduled in June 2007.

➤ **FEPs Database Update**

The NEA FEPs database assembles “Features, Events and Processes” (FEPs) for geological disposal as an aid to national programmes in identifying, classifying, and screening FEPs in safety assessment.

- The existing NEA international database was updated to include data from recent safety assessments and studies and to improve and add greater flexibility to the user interface.
- The final database and user software were provided to funding organisations in 2006.
- Wider distribution of a version with more limited access to underlying data is planned for 2007.

➤ **TDB Project**

The purpose of the Thermochemical Database (TDB) Project is to make available a comprehensive, internally consistent, internationally recognised and quality-assured chemical thermodynamic database of selected chemical elements. This database should meet the specialised modelling requirements for safety assessments of radioactive waste disposal systems.

- Phase III of the TDB project—focused on thorium, tin, iron, and solid solutions—has been extended through 31 January 2007. The project may be further extended by unanimous agreement of the participants. During 2007, a proposal for such an extension will be considered.
- Topics of interest for future work, according to a survey of TDB participants, include review of iron, mobile fission products, update of the existing database and use of chemical analogues.

Outreach and Coordination**➤ Publications released**

- Consideration of Timescales in Post-closure Safety of Geological Disposal of Radioactive Waste. NEA/RWM/IGSC(2006)3, November 2006.
- Proceedings of the 3rd EBS Workshop on Engineered Barrier Systems in the Context of the Entire Safety Case: The Role of Modelling. La Coruña, Spain, 24-26 August 2005.
- Proceedings of the Sorption Workshop: Conclusion of NEA Sorption Project Phase II and Status Analysis of Sorption Modelling for PA. Held in Issy-les-Moulineaux on 10-11 October 2005. NEA/RWMC/SORPTION(2005)3, October 2006.

➤ Publications completed and awaiting final production

- Proceedings of AMIGO-2 Workshop

➤ Other Outreach, Presentations and Coordination

- Presentation on IGSC Timescales Initiative and LTSC project, Eurosafe Forum 2006, Nov 2006.
- Presentation on IGSC Timescales Initiative at RWMC-RF November 2006 workshop
- International Symposium on the Safety Case: 150+ participants, including Russian Federation. Press coverage in NuclearFuel newsletter.
- Presentation of NEA EBS Project at International High-Level Radioactive Waste Management Conference, Las Vegas, May 2006
- 4th EBS Workshop on Design Confirmation and Demonstration.
- Updates and information through NEA web page.

MAJOR AREAS OF ACTIVITY FORESEEN IN 2007-2008***General***

- 9th Meeting of the IGSC planned for week of 22 October 2007.
 - A working group, representing a range of countries and stages of programme development, is conducting work during 2007 and will propose a future programme of work for discussion at IGSC-9 and by the RWMC.

Core Activities

- INTESC: Draft report of questionnaire responses in Spring 2007; workshop scheduled in October 2007; development of document for 2008.
- Geosphere Stability Workshop on Crystalline Rock planned for Fall 2007.

Technical Activities

- Final AMIGO Workshop to be prepared in 2007 and taking place in Apr 2008. AMIGO "Compendium" to be completed.
- Synthesis of EBS Workshop series to be drafted in 2007; publication in early 2008.

Co-operative Projects

- Clay Club:
 - Report on CLAYTRAC (natural tracers) in 2007
 - Updated draft for Self-Sealing report in 2007; final report in 2008

- Workshop on Faulting and Fracturing at Depth in Clays to be pursued for 2008
- Sorption: new phase of sorption work to be initiated to develop guidance document on the application of thermodynamic sorption models in safety cases.
- TDB: A plan for a new phase of TDB work will be proposed at IGSC-9 for approval.

Publications to be finalized

- Proceedings of the International Symposium on the Safety Case
- Proceedings of the 4th EBS Workshop (Tokyo, Japan)
- Synthesis report on the EBS Project
- Report on natural tracer profiles in clay (CLAYTRAC)

Other Outreach and Coordination

- AMIGO 3 workshop on Geosphere stability, Faulting and Fracturing in Clay involving academic community
- Opportunities sought in future Programme of Work for further coordination with FSC, RWMC-RF, better links with academic and scientific community
- Cooperate with NEA Nuclear Safety Committee in Expert Group on Isotopic Composition of SNF; continued coordination with Thermochemical Data Base, and the expert group on P&T of the NEA Nuclear Development Committee
- Conference presentations expected on IGSC activities at Water-Rock Interaction Symposium (China, Aug 2007) and Lille meeting on Clays (Sept 2007)
- Update of webpage to provide clearer structure, access to information, and consistency with RWMC committee and other working groups

FORUM ON STAKEHOLDER CONFIDENCE (FSC)

Accomplishments in 2006/2007 and Expectations for 2007/2008

Updated May 2007

INTRODUCTION

The integration of waste management into wider socio-political considerations is a major challenge for all waste management programmes. The RWMC provides a Forum for information exchange in this area that also allows for exchange of views with relevant stakeholders. The FSC is composed of nominees from NEA Member countries with responsibility, overview, and/or experience in the field of stakeholder interaction and confidence. Workshops in national contexts are the preferred means for interaction with a broad range of stakeholders. These workshops provide an opportunity to view the inner workings of waste-management programs, the methods they have employed for stakeholder interactions, the successes and failures they have had, and hear directly from involved stakeholders their own views about the methods by which they were involved in the decision-making. The aim is for all participants at the workshops to have a possibility to learn how to change their own approach and mindset in order to interact with other stakeholders in a way that enhances understanding and builds mutual trust. Additionally, at each FSC meeting, stakeholders' perspectives and needs are analysed taking into account experience also from processes outside the nuclear area. Specific attention is paid to the needs for change and adaptability of organisations. Experiences of media interaction and processes of societal decision-making on technological issues are also analysed with respect to their relevance for waste management.

Reference documents

Strategic document: <http://www.nea.fr/html/rwm/docs/2001/rwm-fsc2001-2-rev2.pdf>

Programme of work (PoW): NEA/RWM/FSC(2005)1/REV3 (February 2007)

Mandate: NEA/RWM/FSC(2003)4/REV2

HIGHLIGHTS

- National Workshop and Community visit in Hungary, Nov. 2006. It was a meeting with high visibility in Hungary. The press was present, including the national media. Attendance was impressive, with 11 mayors present. The FSC used the workshop also to test the main messages presented in its report on "building a durable relationship with a facility and radioactive waste management site". There was positive feedback, and the FSC decided to proceed with final comments and then publication.
- FSC June meeting with topical sessions involving outside experts on media, organisational change, tools for societal decision making. The session on building a sustainable relationship to a waste facility was held jointly with KSO, the Association of Swedish Municipalities with Nuclear Facilities (17 Swedish participants, 2 mayors)
- The contribution of the FSC was recognized at the review meeting of the International Convention on the Safety of Radioactive Waste and Spent Fuel Management.

- Several reports were completed and several briefings on the FSC given.

Core Group

- Dr. Janet Kotra (US NRC) was unanimously elected at FSC Business Meeting (November 2006) to serve as FSC Chair, replacing Dr. Peter Brown (NRCan) who stepped down
- Core Group members: E. Atherton (UK Nirex), B. Hedberg (KASAM), M. Takeuchi (NUMO)

PROGRESS/ACCOMPLISHMENTS SINCE RWMC-39 (MARCH 2006)

- **FSC-7 Meeting, Issy, June 2006**
 - ✧ Topical Session on “Tools and processes to help society prepare and manage decisions in the field of RWM”
 - ✧ Topical Session on “Experience with electronic, web and internet platforms for communicating on RWM”
 - ✧ Topical Session on “Organisational changes: cultural and structural aspects”
 - ✧ Joint FSC-7 session with KSO (Association of Swedish Municipalities with Nuclear Facilities) on building a durable relationship to a waste facility; 17 Swedish participants
 - ✧ Discussion of member-proposed FSC Flyer
 - ✧ Discussion of structure of country reports
 - ✧ Updates from international and national organizations
- **Outreach**
 - ✧ National Workshop and Community Visit, Germany (2004): Proceedings published in glossy cover, distributed free of charge to participants and FSC members.
 - ✧ National Workshop and Community Visit (Hospitalet de l'Infant), Spain (2005): Summary and International Perspective published and distributed online; full proceedings in press; an article appeared in the *NEA News*, Spring 2006
 - ✧ National Workshop and Community Visit (Bátaapáti), Hungary (November 2006): Publication of an article in Spring 2007 *NEA News*.
 - ✧ Interviews with social actors in connection with building a sustainable relationship to a waste facility (the Value-Added Project of the FSC) and validation of the final report with stakeholders at Hungary Workshop; publication of the report *Fostering a Durable Relationship Between a Waste Management Facility and its Host Community; Adding Value through Design and Process* in English and in French (in press); article published in Spring 2007 *NEA News*.
 - ✧ Updates, including availability of proceedings, notified to FSC stakeholder-list
 - ✧ Update of public webpage (and full availability of meetings documentation on internal FSC-download site)
 - ✧ Link established to EDRAM whereby they may take NEA texts and will indicate where the state-of-the-art has moved since the NEA report was released.
 - ✧ Joint work with the WPDD on brochure on stakeholder involvement in decommissioning nuclear facilities
- **Publications released (available on public-access webpage)**
 - ✧ Proceedings of two media-related topical sessions held in 2004 and 2005, respectively
 - ✧ Proceedings of the topical session on RD&D held in 2005

- ✧ Proceedings of the topical session on E-Communication held in June 2006
- ✧ Proceedings of the topical session on cultural and organisational change held in June 2006
- ✧ Review of FSC activities, presented at VALDOR Conference, Stockholm, May 2006

➤ **Publications completed and awaiting final production**

- ✧ *Cultural and Structural Changes in Radioactive Waste Management Organisations - Lessons Learnt*. NEA/RWM/FSC(2007)2 (In English and in French)
- ✧ *Fostering a Durable Relationship between a Waste Management Facility and Its Host Community*. NEA/RWM/FSC(2007)1 (In English and in French) [see Annex to this document for Summary].
- ✧ *Stakeholder Issues and Involvement in Decommissioning Nuclear Facilities*. NEA/RWM/WPDD(2007)1.

➤ **Other**

- ✧ Overview of FSC activities for WATEC (IAEA), IGSC, and WPDD at their annual meetings
- ✧ Presentation of the FSC work on organizational change to the CRPPH at its annual meeting

MAJOR AREAS OF ACTIVITY FORESEEN IN 2007-2008

➤ **PoW areas to benefit from topical sessions and/or reports in view of further developments:**

- ✧ *Link between RWM organizations, the media, and stakeholder confidence*. A topical session for each FSC annual meeting is developed by the Media & Communication Group. In June 2007: Discussion of case studies of how organizations handled communication to prepare for, or react to, major events.
- ✧ *Tools and processes to help society prepare and manage decisions* (e.g., about technology, sites) through stakeholder involvement. In June 2007: Presentations on stakeholder on tools and processes for transferring burdens, knowledge, responsibilities to future generations
- ✧ *Link between Research, Development & Demonstration (RD&D) and Stakeholder Confidence*. In June 2007 presentations on 1. Outcomes of the Safety Case symposium; 2. Outcomes of the long-term safety criteria (LTSC) workshop in November 2006; 3. KASAM initiative on the implementation of the RISCOS model; 4. Presentations by FSC members on the experience of public meetings when dealing with the safety case. IGSC representatives will be invited. Intention is to explore better the potential contribution of the FSC in this area with, and complementary to, the IGSC.

➤ **PoW areas for simple exchange of information.** These areas were given priority in the past few years and are now sufficiently developed.

- ✧ *Evolving Cultural and Organisational Changes in RWM Institutions vis-à-vis Stakeholder Confidence*
- ✧ *Increasing the value of waste management facilities to local communities*

➤ **Outreach**

- ✧ Documentation of National Workshops and Community Visits (*see further information below*)
- ✧ 2007 National Workshop and Community Visit
- ✧ Cooperation in new areas: IGSC and LTSC (*see above*)
- ✧ Cooperation with CARL project
- ✧ Communication of FSC PoW and review of lessons learnt to IAEA meetings, e.g., WATEC
- ✧ Continued development of a set of FSC two-page information documents (FSC Identity; FSC Principles and Main Lessons; Tools for Decision-Making with Stakeholder Involvement i.e., two-page documents summarizing the major reports and products of the FSC)

➤ **Publications to be finalised**

- ✧ National Workshops and Community Visits: Hungary
- ✧ Documentation of future topical sessions.

MAJOR AREAS OF ACTIVITY FORESEEN IN 2008 AND BEYOND:

- ✧ The strategic directions should remain as in the current strategic document
- ✧ The current PoW will continue to inform the activities of the group (*see above*)
- ✧ In case either the PoW or the strategic document require substantial modification, RWMC agreement will be sought.

WORKING PARTY ON DECOMMISSIONING AND DISMANTLING (WPDD)

Accomplishments in 2006/2007 and Expectations for 2007/2008

INTRODUCTION

The WPDD supports the RWMC by keeping under review the policy, strategic, and regulatory aspects of decommissioning of phased-out nuclear installations. Its scope of work includes decommissioning and dismantling of shut-down facilities up to and including the release of the site but excluding fuel removal, removal of nuclear processing fluids, post-operational clean out of fuel residues and removal of operational wastes.

In accordance with the 'WPDD Strategic Document for Phase 2' the work programme of the WPDD comprises activities in the following key areas (each of which are further described in greater detail below):

- Policy, regulation and strategy,
- Funding and costs,
- Techniques,
- Decommissioning materials management and site release; and
- Human and organisational factors

Reference Documents

WPDD Strategic Document for Phase-2: NEA/RWM/WPDD(2006)2

WPDD 3rd Programme and Method of Work: NEA/RWM/WPDD(2006)9

Core Group Members

WPDD chairperson is Mr. Ivo TRIPPUTI (SOGIN). Members of the Core Group are: Mr. Doug METCALFE (Natural Resources Canada), Mr. Jean-Guy NOKHAMZON (CEA), Mr. Dominick ORLANDO (USNRC), Mr. Juan-Luis SANTIAGO (ENRESA), and Mr. Luis VALENCIA (FZK).

HIGHLIGHTS

- WPDD-7 Meeting (Nov 2006): Joint Topical Session with RWMC-RF on 'Emerging issues and trends in regulatory practices during the decommissioning and dismantling of nuclear power plants'

- WPDD-7 Meeting (Nov 2006): Special One-Day Session on ‘The French Decommissioning Scene’, including a visit to CEA facilities at Fontenay-aux-Roses
- Status Reports on Decommissioning Strategies, Release of Sites and Funding
- Proceedings of 2005 Topical Session on ‘Stakeholder Involvement in Decommissioning Projects’ and publication of a brochure on the same topic
- Questionnaire survey on national practices concerning the release and reuse of materials and buildings, as input to a status report on the same topic
- Updates of the ‘Map of International Activities on Decommissioning and Dismantling’
- Updates of the national Fact Sheets providing country-specific information on decommissioning activities

PROGRESS/ACCOMPLISHMENTS SINCE RWMC-39 (MARCH 2006)

➤ **Policy, regulation and strategy**

A status report on the strategy selection issues was published: ‘Selecting Strategies for the Decommissioning of Nuclear Facilities’.

A topical session was held in October 2006, in cooperation with the RWMC Regulators’ Forum, on ‘Emerging issues and trends in regulatory practices during the decommissioning and dismantling of nuclear power plants’. This facilitated an exchange of information and experience on the following issues in particular:

- Changes to the risk profile after shutdown and removal of spent nuclear fuel;
- Consequential changes to the regulatory regime after shutdown; and
- Striking a balance between requirements for flexibility and harmonisation of regulatory approaches.

➤ **Funding and costs**

A status report on ‘Decommissioning Funding: Ethics, Implementation, Uncertainties’ was published, providing an overview of relevant considerations for funding mechanisms with regard to underlying ethical principles, factors influencing the accumulation and management of decommissioning funds, together with the main sources of uncertainties with funding systems. The report incorporated comments/reviews by several NEA committees, including RWMC.

➤ **Techniques**

The WPDD reviewed and published a state-of-the-art report prepared by the CPD¹ entitled ‘Radioactivity Measurements at Regulatory Release Levels’.

➤ **Decommissioning materials management and site release**

¹ Co-operative Programme for the Exchange of Scientific and Technical Information concerning Nuclear Installations Decommissioning Projects.

A status report on ‘Releasing the Sites of Nuclear Installations’/ ‘Libération des sites des installations nucléaires’ was published. This summarises current world-wide practice and regulation on this issue and brings to a conclusion the current work activity relating to site release.

The WPDD task group on the release of materials, buildings and sites has undertaken a questionnaire survey of current national practices relating to the release and reuse of materials and buildings. The survey results have been processed and a draft status report on ‘The Release and Reuse of Materials and Buildings’ has been produced. This status report is being finalised.

➤ **Human and organisational factors**

The proceedings of a topical session on stakeholder involvement (November 2005) were published as a WPDD report ‘Proceedings of the Topical Session on Stakeholder Involvement in Decommissioning Projects’. In addition, a higher level document on the key messages and lessons learnt, ‘Stakeholder Involvement in Decommissioning Nuclear Facilities,’ is being published² following review and approval by WPDD and FSC.

➤ **Outreach Activities / Information on D&D Activities Internationally**

A ‘road map’ providing an information reference on ongoing international decommissioning activities (‘Map of International Activities on Decommissioning and Dismantling’) was updated in October 2006 and published as a general distribution document. The data are updated yearly.

Country fact sheets comprising information on status, objectives, funding, techniques and waste in decommissioning, has been made available on the (open) NEA web pages. The data are updated yearly to reflect the status of decommissioning activities.

WPDD published a report (prepared by the CPD³) giving basic information on the projects participating in the programme, its modus operandi and summarising the first twenty years of experience, ‘The NEA Co-operative Programme on Decommissioning: A decade of progress’, was published. WPDD-7 included a special session on ‘The French Decommissioning Scene’, which included a visit to CEA facilities at Fontenay-aux-Roses

Briefings on WPDD activities at the IAEA Conference on ‘Lessons Learned from the decommissioning of nuclear facilities and the safe termination of nuclear activities’ (Athens, December 2006), and at other international meetings.

Publications

- ‘Selecting Strategies for the Decommissioning of Nuclear Facilities’
ISBN 92-64-02305-4 – Free paper or web versions
- ‘Releasing the Sites of Nuclear Installations’
ISBN 92-64-02307-0 – Free paper or web versions
- ‘Libération des sites des installations nucléaires’

² May 2007

³ Co-operative Programme for the Exchange of Scientific and Technical Information concerning Nuclear Installations Decommissioning Projects

ISBN 92-64-02308-9 – Free paper or web versions

- ‘Radioactivity Measurements at Regulatory Release Levels’
ISBN 92-64-02319-4 – Free paper or web versions
- ‘Decommissioning Funding: Ethics, Implementation, Uncertainties’
ISBN 92-64-02312-7 – Free paper or web versions (in print)
- ‘The NEA Co-operative Programme on Decommissioning: A decade of progress’
ISBN 92-64-02332-1 – Free paper or web versions

Reports (General Distribution Documents):

- Proceedings of the Topical Session on Stakeholder Involvement in Decommissioning Projects [NEA/RWM/WPDD(2006)5]
- Map of International Activities on Decommissioning and Dismantling: October 2006 [NEA/RWM/WPDD(2006)10]
- Stakeholder Issues and Involvement in Decommissioning Nuclear Facilities [NEA/RWM/WPDD(2007)1]

MAJOR AREAS OF ACTIVITY FORESEEN IN 2007-2008

➤ **General**

The first phase of work for WPDD covered the 5-year period from 2001 to 2005. During this period it published several documents relating to decommissioning aimed at both general and technical audiences and established a web-based database of National Fact Sheets on Decommissioning. It also arranged two international workshops on decommissioning: Tarragona, Spain (2003) and Rome, Italy (2004).

During the second phase of work (2006 – 2010), the central priority of the WPDD will continue to be the fostering of transfer of knowledge and experience in decommissioning. Current expectations in relation to the main topical areas are:

➤ **Policy, regulation and strategy**

Proceedings of the topical session on ‘Emerging issues and trends in regulatory practices during the decommissioning and dismantling of nuclear power plants’ (October 2006) are being distributed⁴. In addition, consideration is being given to producing a status report on regulatory practices in member states, using the output from the topical session as a basis. This report will also be provided to the RWMC Regulators’ Forum for review.

Funding and costs

The WPDD will decide during 2007 whether further work should be done on the methodologies for cost estimation, to follow on from the joint NEA/IAEA/EC publication on cost items for decommissioning

⁴ May 2007

(‘Yellow Book’). In addition, WPDD will consider whether to undertake a study on the variables that influence the production of radioactive materials from the decommissioning of different types of standard facilities – given the importance of this factor in overall decommissioning costs.

➤ **Techniques**

The CPD is establishing⁵ task groups on the following topics:

- Remote Handling Techniques; and
- Decontamination and Dismantling of Concrete Structures

➤ **Decommissioning materials management and site release**

A status report on ‘The Release and Reuse of Materials and Buildings’ will be published during 2007, bringing to a conclusion the work of the WPDD Task Group on the release and reuse of materials, buildings and sites. (A status report on the release of sites was published in 2006.)

➤ **Human and organisational factors**

A brochure, ‘Stakeholder Issues and Involvement in Decommissioning Nuclear Facilities,’ will be published during 2007 based on the outputs from a topical session on this issue (organised jointly with the FSC) that took place in November 2005.

A topical session on Human and Organisational Factors will take place in November in conjunction with the next annual meeting of the WPDD. *Inter alia* this may consider issues such as organisational arrangements during decommissioning, manning levels, contracting schemes, planning aspects, training, skills assessment and knowledge management.

➤ **Outreach Activities / Visibility**

In addition to the above work, WPDD will undertake annual updates of the country fact sheets on the framework for decommissioning activities in each country, and of the ‘Map of International Activities on Decommissioning and Dismantling’.

WPDD-8, in November 2007, will include a one-day session on the UK decommissioning scene.

➤ **Emerging Areas**

The WPDD Core Group will be studying an initiative to provide transfer of knowledge from decommissioners to the designers of new nuclear power plants and to current and future NPP operators.

⁵ The kick-off meetings of both groups took place on 4 May 2007