

Unclassified

NEA/RWM(2014)1

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

11-Mar-2014

English - Or. English

**NUCLEAR ENERGY AGENCY
RADIOACTIVE WASTE MANAGEMENT COMMITTEE**

Cancels & replaces the same document of 25 February 2014

WORKING PARTIES ACHIEVEMENTS AND PLANS

This document supports Item 8 of the provisional agenda of the 47th session of the RWMC, to be held 26-27 March 2014.

A minor correction has been made to this version of the document.

michael.siemann@oecd.org

JT03354064

Complete document available on OLIS in its original format

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

NEA/RWM(2014)1
Unclassified

English - Or. English

TABLE OF CONTENTS

FORUM ON STAKEHOLDER CONFIDENCE..... 3

 INTRODUCTION 3

 HIGHLIGHTS 2013 3

 ACTIVITIES AND ACCOMPLISHMENTS SINCE RWMC-46 (MARCH 2013) 4

 MAJOR AREAS OF ACTIVITY FORESEEN IN 2014-15 5

INTEGRATION GROUP FOR THE SAFETY CASE (IGSC) 7

 INTRODUCTION 7

 HIGHLIGHTS 2013 7

 ACTIVITIES AND ACCOMPLISHMENTS SINCE RWMC-46 (MARCH 2013) 8

 MAJOR AREAS OF ACTIVITY FORESEEN IN 2014 – 2015 10

WORKING PARTY ON MANAGEMENT OF MATERIALS FROM DECOMMISSIONING AND
DISMANTLING (WPDD) 12

 INTRODUCTION 12

 HIGHLIGHTS 2013 13

 ACTIVITIES AND ACCOMPLISHMENTS SINCE RWMC-46 (MARCH 2013) 13

 MAJOR AREAS OF ACTIVITY FORESEEN IN 2014 - 2015 14

FORUM ON STAKEHOLDER CONFIDENCE

INTRODUCTION

The integration of wider socio-political considerations is a major challenge for all waste management programmes. The RWM provides a forum for information exchange in this area that also allows for exchange of views with relevant stakeholders. The Forum on Stakeholder Confidence is composed of nominees from NEA Member countries with responsibility, overview, and/or experience in the field of stakeholder interaction and confidence. The FSC is, above all, a place of learning. Efforts are focused on developing a dialogue among stakeholders and on seeking to build durable confidence about management solutions. The stakeholders include any person, group or institution that has an interest or a role to play at any stage of the decision-making process.

The FSC meets at least once per year, typically alternating between two meeting formats. Regular (annual) FSC meetings focus on information exchange among the members and in-depth discussion of specific topics. National workshops and community visits, hosted by a member institution, allow for interaction with a broader range of stakeholders in the national context, on topics of concern to the stakeholders. The FSC workshops are recognised to provide a framework for direct exchange amongst stakeholders in an environment of respect and mutual learning. For the host country participants, the FSC workshops are an opportunity to present and analyse their own experience in a neutral setting, to benefit from international feedback and to leave a record of their viewpoints. International delegates gain a better understanding of the history and practice of radioactive waste management in the host country. All participants improve their knowledge of the factors influencing public confidence in the domain of radioactive waste management. The workshop is an opportunity to reinforce or create ties amongst stakeholders.

Reference documents

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

FSC Phase-3 Programme of work (2010 and beyond): NEA/RWM/FSC(2010)1

Mandate: NEA/RWM(2013)2/PROV (setting the mandate through 31 December 2016)

Core Group Members

The FSC chairperson as of October 2012 is Holmfridur Bjarnadottir (National Council for Nuclear Waste). Jo-Ann Facella (NWMO) is Principal Vice-Chair. The Core Group confirmed at the FSC-14 regular meeting (Sept. 2013) includes member Jay Redgrove (UK NDA), Martine Hurault (Andra), Pascal Kuenzi (Bfe) and Jose Cuadrado (US NRC).

HIGHLIGHTS 2013

Sustained and growing interest in the FSC is witnessed by the integration of new members over the past year or so from Belgium, France, Germany, Hungary, Poland, Republic of Korea, Russian Federation, Spain, Switzerland, the United Kingdom, United States and the European Commission.

This renewal was taken into account at the 14th FSC regular meeting (17-19 September 2013) during which new members explored concepts from the 2013 FSC Annotated Glossary, thereby consolidating topical knowledge. FSC-14 took a detailed look at early involvement in RWM decision making, including compliance with international conventions (affording an opportunity for cross-fertilisation with NEA Legal Affairs). A substantial topical session addressed transparency, which was elected as a new transversal theme in the Programme of Work. Applications and new directions in the area of social media were discussed. The Secretariat-sponsored study regarding local community demands on monitoring was finalised with FSC input. Members decided to support outreach with a web-based listing of pertinent international conferences and a library of formatted FSC presentations. Construction of a “FAQ” to serve stakeholders beyond the FSC is being considered. Major flyers and reports will be updated in 2014.

ACTIVITIES AND ACCOMPLISHMENTS SINCE RWMC-46 (MARCH 2013)

Activities and Projects

- **Meeting of the FSC**

The 14th FSC regular meeting took place 17-19 September 2013 at NEA Headquarters. In order to ensure the integration of new delegates, each was assigned to present a concept from the 2013 FSC Annotated Glossary. The Republic of Korea and the Russian Federation joined the FSC and gave detailed country presentations. The 2012 Czech Republic National Workshop was followed up by a country update delivered in tandem by the FSC member delegate and the Chair of the pluralistic Working Group for Dialogue on Site Selection Process. Updates were heard also from Finland, Japan and the UK. FSC-14 took a detailed look at early involvement in RWM decision making, including both compliance with legal requirements and voluntary development of early dialogue. A topical review of scholarly and practical experience regarding transparency opened a perspective for cross-fertilisation with the Regulators’ Forum. Other PoW themes were “refreshed”, e.g. by a plan to survey members’ applications of social media. The Secretariat-sponsored study regarding stakeholder demands on monitoring and linked to “Preservation of Records, Knowledge, Memory” (RK&M) was finalised. The FSC asked the Secretariat to host a web-based listing of pertinent international conferences and mission reports, to be input by delegates. This will include a library of formatted FSC presentations to support members who act as “ambassadors”. The Core Group was tasked to explore the feasibility of creating an “FAQ” to serve civil society and academic stakeholders. Flyers and major reports will be updated in 2014 on the basis of FSC-14 discussions, further interviews and limited desk research.

- **Supporting Early Involvement (Exploratory session under FSC PoW theme 4 “Tools and Processes”)**

National and international requirements stipulate that civil society must be involved at an early point in decision making about environmental issues, including RWM. Governments and implementing organisations may need support to respect not only the letter but also the spirit of these requirements. NEA Legal Affairs reviewed common difficulties in compliance with the Aarhus and Espoo Conventions as seen in case law. An FSC case study then showed how early involvement and dialogue with civil society have been successfully used to develop an overall national RWM plan and site selection process. It was decided to update the FSC Stakeholder Involvement Techniques booklet with 2 new chapters: on early involvement, and on compliance and assessment of whether there has been “enough” involvement, including oversight arrangements. The FSC agreed to a continuing exchange with the NEA Nuclear Law Committee, and to cooperate where appropriate in two European-level initiatives intended to heighten effective citizen participation in RWM (DG ENER/JRC “E-TRACK” and the European Nuclear Energy Forum “TgBEPPa”).

- **Transparency and “Changing Dynamics of Interaction among RWM Institutions and Stakeholder Confidence” (Theme 2)**

A long session at FSC-14 examined how interactions between the officials in RWM institutions may affect stakeholder confidence, and how transparency may contribute to improvement. A scholarly presentation was delivered on the “community of practice” or shared knowledge and paradigms which gradually build up in communications between a regulator and an implementer. FSC members offered a case study on dialogue between two national organisations whose role in RWM is legally and pragmatically distinct – and yet which must interface strongly. Breakout groups then discussed the challenges encountered in the relations between different actors in long-term RWM processes, and transparency as a requirement and as a helper in these relations. The FSC reviewed the transparency requirements of the European Council Directive 2011/70, and also commented on the the Regulatory System and Functions table developed by the Regulators’ Forum. It was agreed to look further into the concept of “regulatory system” – which comprises not only the technical regulators but also operators and the community, in the context of RWM oversight.

- **“Visioning” and Increasing the Value of Waste Management Facilities to Local Communities (Theme 5)**

The FSC identified as early as 2002 how a sustainability outlook can support a positive long-term relationship between a community and a facility, notably through maximising the value added by hosting a facility. Communities each have their own definition of well-being, and their vision of a desired future may include such diverse elements as economic health and enhanced opportunities, environment, safety and security, spiritual aspects, and social conditions. Examples were heard of how RWM organisations collaborate with potential host communities to create added value on many different dimensions including compliance; mitigation, remediation and managing environmental risks; compensation and community benefits; added value and shared value. It was decided to take this experience into account by updating the 2007 FSC report [Fostering a Durable Relationship between a Waste Management Facility and its Host Community](#), respecting the usual FSC practice of indicating a wealth of approaches rather than a “best practice” prescription.

- **Publications and Documents**

- FSC study on [“Local communities’ expectations and demands on monitoring and the preservation of records, knowledge and memory of a deep geological repository”](#) [NEA/RWM/R(2013)4]
- Synthesis of the Czech Republic National Workshop and Public Debate Meeting, "[Deliberating Together on Geological Repository Siting: Expectations and Challenges](#)" [NEA/RWM/R(2014)1]

Outreach, Presentation and Stocktaking

- Plenary presentation by the Secretariat at the 2nd International Safety Case Symposium (The Safety Case for Deep Geological Disposal of Radioactive Waste: 2013 State of the Art; 7-9 October, 2013)
- Plenary presentation by the Secretariat at conferences: IHLWM, MoDeRn, SFRP
- Briefing of NEA Working Parties

MAJOR AREAS OF ACTIVITY FORESEEN IN 2014-15

Activities and Projects

- Updating the FSC PoW to reflect FSC-14 findings

- Updating of the FSC Strategic document
- Updating reports and studies under the guidance of the FSC Core Group
- Various web-based services to members and stakeholders including potentially an FAQ
- 15th FSC meeting with topical sessions on the main FSC PoW themes
- Organisation of 10th FSC workshop in 2015 depending on countries' requests

Knowledge Consolidation and Transfer

- ***Publications Expected***
 - Substantial updates of the existing reports on Added Value associated with repository projects, and on Stakeholder Involvement Techniques
 - Flyers on reports and topics as determined by the Core Group of the FSC, in particular on Transparency
- ***Outreach, presentation and stocktaking***
 - Participate in and support (as needed) RWMC projects on Preservation of RK&M Across Generations, and RWMC-RF initiatives
 - Potential examination of topical areas with the IGSC

INTEGRATION GROUP FOR THE SAFETY CASE (IGSC)

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.

The programme of work reflects two major directions for the IGSC in the coming years. The first is a renewed emphasis on the technical and methodological issues in the core of the safety case (i.e., safety assessment), as there have been significant advances. The second theme is the integration of long-term safety imperatives with operational and engineering considerations, which are of immediate concern as some programmes are approaching licensing and construction phases of repository development. The PoW also emphasises increased coordination by IGSC with the RWMC and its working bodies.

Reference Documents

IGSC Foundation Document:	NEA/RWM/IGSC(2000)10
IGSC Programme of Work 2014-2016:	<i>Forthcoming</i>
IGSC Mandate:	NEA/RWM(2013)2/PROV

IGSC Chair and Core Group Members (as of IGSC-14)

IGSC chairperson is Klaus-Jürgen Röhlig (TU Clausthal, Germany). Members of the Core Group are: Fabrice Boissier (ANDRA), Paul Gierszewski (NWMO), Allan Hedin (SKB), Doug Ilett (UKEA), Hiroyuki Umeki (JAEA) and Abe Van Luik (USDOE/WIPP).

HIGHLIGHTS 2013

The IGSC held their 2nd International Safety Case Symposium in October 2013. The purpose of the Symposium, “*The Safety Case for Deep Geological Disposal of Radioactive Waste: 2013 State of the Art*”, was to assess the practice, understanding and roles of the safety case, as applied internationally at all stages of repository development, including the interplay of technical, regulatory and societal issues, as they have developed since 2007.

The Symposium was organised and hosted by the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD), and supported by the EC and the IAEA.

The 2013 Symposium attracted 168 participants from 65 organisations and 17 countries and international bodies.

- IGSC-15 Meeting (Oct 10-11, 2013), followed immediately after the Safety Case Symposium, gave IGSC members an opportunity to discuss / reveal their views of the Symposium. With the Safety Case Symposium, no topical session was planned for in the 2013 annual meeting.

ACTIVITIES AND ACCOMPLISHMENTS SINCE RWMC-46 (MARCH 2013)

Activities and Projects

- **Meeting of the IGSC-15**

IGSC-15 was held on 10-11 October, at the OECD Conference Centre in Paris, France. In this 2013 plenary meeting, no topical session was scheduled due to the Safety Case Symposium. Nevertheless, the IGSC revealed and discuss on-going projects / activities related to safety case development. The Topical Session in IGSC 16 (2014) will evaluate "in-depth treatment of low probability events including seismic events, for both operational and post-closure periods".

- **Safety Case Symposium**

"*The Safety Case for Deep Geological Disposal of Radioactive Waste: 2013 State of the Art*", held on October 7-9, 2013, was to assess the practice, understanding and roles of the safety case, as applied internationally at all stages of repository development, including the interplay of technical, regulatory and societal issues, as they have developed since 2007.

The Symposium was organised and hosted by the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD), and supported by the EC and the IAEA. The 2013 Symposium attracted 168 participants from 65 organisations and 17 countries and international bodies.

- **Operational Safety**

Operational safety issues in geological disposal facilities are considered similar to those in operating nuclear facilities. Nevertheless, as more national radioactive waste management programmes are approaching their implementation phase, operational safety needs to be demonstrated to ensure a well-designed deep geological repository. The Expert Group on Operational Safety (EG-OS) held a kick-off meeting in June 2103 Two technical workshops particularly dedicated to (i) how to manage fire risk including the design of an underground ventilation system and (ii) design basis accidents were also held in 2013 and early 2014, in Paris. In these workshops, members exchanged knowledge and shared practical experience in managing conventional fire risks and other underground operational concerns.

- **Salt Club**

Salt rock has been considered as a candidate host rock because of its favourable characteristics supporting the safe development of a repository. Specifically, salt rock has extremely low permeability / hydraulic conductivity which isolates the emplaced waste from near surface groundwater. Other positive attributes of salt rock include its high thermal conductivity, self-healing properties to reduce potential radionuclide pathways and its predictable geology.

The Salt Club held its 2nd plenary meeting (SC-2) was held on Sept 18, 2013, in Berlin where an open and thorough discussion was carried out and future path of the Salt Club was identified. Also in 2013, the Salt Club has approved the publication of the proceedings of a workshop on "Natural Analogues". More details of this project can be found at <http://www.oecd-nea.org/rwm/saltclub/>. Next annual meeting will be held on March 18, 2014, in Paris.

- **Clay Club**

The Clay Club held their 23rd annual plenary meeting on September 24-26, 2013, in Horonobe, Japan. The meeting was hosted by the Japan Atomic Energy Agency (JAEA) with a Topical Session focused on “Natural and Engineered Barriers for Radioactive Waste Confinement”. In this Topical Session, members exchanged experiences and knowledge relevant to developing a geological repository in rock salts. The next meeting is planned for September 30 – October 2, 2014, in Bure, France. The Topical Session of the 2014 meeting will focus on “Diffusion behaviour of long-lived radionuclides in clay media”. More information of the Clay Club projects can be found at <https://www.oecd-nea.org/download/clayclub/index.html> (password protected).

- **FEP Database**

Since 2012, the IGSC continues to improve the NEA Features, Events, and Processes (FEP) database, reflecting the latest FEPs based on the improved knowledge of various member countries. In 2013, a Version 0 web-based database was developed and a detailed design specification of the database was developed. In 2014, the FEP Task Group envisages that further advancement and/or improvements of the database will be incorporated and it is anticipated that an improved Version 1 database will be available for use in 2015. A project progress meeting is currently planned for in mid-2014.

- **Scenarios**

The Scenario project was initiated to review the tools and methods used to describe a repository evolution. The project aims at identifying commonalities (i.e. possible evolutions of the disposal system) and weaknesses of models attributed to unknown or less known mechanisms. A task group has been formed to further develop the derivation of scenarios using safety functions. A survey aims at reviewing the current status on how to handle issues related to scenario development has been carried out and responses to the survey are currently being analyzed. A workshop on scenario development and analysis is planned for in late 2014.

- **Repository Meta-Data Management (RepMet)**

The IGSC approved a new project on data management. A working group was formed in 2013 to discuss data management, including meta-data, for preserving essential records and data up to the closure phase of a repository. The Task Group held their 1st annual meeting on January 20-21, 2014 to evaluate applicable standards in building a metadata system and relevant experiences gained from different member countries were also discussed. Following this meeting, the NEA Secretariat is in the process of developing a template to cover the metadata related to “waste packages ready for disposal” which analysis will be carried out based on the members’ inputs. Results will be thoroughly discussed in the 2nd RepMet meeting, currently scheduled for September 18-19, 2014. All RepMet participants are also invited to participate in an international conference on “Constructing Memory” which will take place in Verdun, on September 15-17, 2014.

- **MoDeRn**

Under the initiative of the RK&M Project, the NEA Secretariat, with the assistance of expert consultants, has developed two reports - a technical report on “Monitoring of deep geological repositories” including the key findings from the MoDeRn conference (March 2013), and a report covering the expectations of the public stakeholders in how to manage a deep geological repository. In 2014, NEA Secretariat will develop an overview report with a focus on linking the technical and non-technical aspects of monitoring a repository.

It is also planned that a 2-4 page flyer may be developed following the overview report, summarizing key monitoring issues on geological disposal.

- **FORGE**

IGSC co-operates in the EC FORGE project that has been initiated to address key gas migration issues in repository performance assessment. Gases which may be produced in a repository include (i) hydrogen from metal corrosion, (ii) radiolytic hydrogen from the radiolysis of water; (iii) radon from the radioactive decay of some waste and/or (iv) carbon dioxide and methane from biodegradable wastes. The FORGE project addressed various gas migration issues through a series of laboratory and field-scale experiments, including the development of methods for up-scaling allowing the optimization of concepts through detailed scenario analysis. A project closure scientific conference was held on February 5-7, 2013. IGSC representatives gathered key information from the conference. Key results of the FORGE Conference are currently being incorporated into an IGSC position paper on gas migration in deep geological disposal. In 2014, the IGSC may consider the development of a flyer and/or a brochure on this topic.

- **Organisational Issues In Safety Cases**

The structure and operations of an organization affects stakeholder confidence and the development of the safety case. Activities on organizational issues are initiated to develop tools for assessing the strengths and weaknesses of an organization so as to increase confidence. The task group has since developed a preliminary argumentation model (AM). To facilitate further development of the AM, a tool called “SCARAB” has also been posted on an access restricted web page for interested IGSC members to provide input for further discussions. A pilot study launched in 2012 suggested the AM approach to be further tested by volunteer organisations. In the 2013 IGSC plenary meeting, the Task Group on Organizational Issues has agreed to focus on management procedures / tools. Further results will be reported in the next IGSC meeting.

- **Thermochemical Database (TDB) Project**

The TDB project aims to produce a database that provides a comprehensive, consistent and high quality chemical thermodynamic database of selected chemical elements. Expert teams, formed by experts from universities and research institutes around the world, carry out critical reviews of experimental data. In November 2013, the TDB Executive Group discussed their Programme of Work of the next phase. Phase V will continue to focus on the update of the actinides and organic volumes. 3 state-of-the-art reports on (i) cements, (ii) high ionic strength systems; and (iii) extrapolation to high temperatures will also be developed. The TDB Management Board has also agreed on cooperation with the THEREDA Project to build a joint international thermochemical database based on the Pitzer model. More information of this project can be found at <http://www.oecd-nea.org/dbtdb/>.

Outreach, Presentation and Stocktaking

- 2 flyers have recently been published: (i) The Long-Term Safety Case for Geological Disposal of Radioactive Waste; and (ii) Optimization of Geological Repositories

MAJOR AREAS OF ACTIVITY FORESEEN IN 2014 – 2015

Activities and Projects

- **IGSC Annual Meeting**

The IGSC will hold their 2014 annual meeting on October 7-9, 2014.

- **Salt Club**

In 2014, the Salt Club continues their US-German workshop on actinide and brine chemistry in a salt repository and their US-German Geotechnical workshop. The working group also continues the development of a Salt FEP catalogue and their Salt Knowledge Archive. The potential to incorporate the FEP list to the NEA web-based FEP database (currently under development) as well as archiving all salt related records / reports on the NEA server system were discussed. Their 3rd annual meeting will be held on March 18, 2014, in Paris, NEA Headquarters.

- **Update to the FEPs Database**

The project anticipates implementing the updated IFEP list into a prototype web-base database starting in 2014, with possible further database enhancement in late 2014 to 2015.

- **Clay Club Workshop**

The Clay Club continues their on-going projects. Next meeting will be held in Bure, France. The topic of “Diffusion behaviour of long-lived radionuclides in clay media” will be thoroughly reviewed in the 2014 meeting.

- **Scenarios**

In 2013, IGSC members had replied to a questionnaire developed to seek inputs of how to formulate and manage various potential scenarios which may take place in a geological repository. Based on the responses of the questionnaire, a Scenario development workshop will be organised in late 2014.

- **Organizational Issues In Safety Cases**

The task group on organizational issues will focus on management procedures / tools that can be used to characterize organizational issues of both implementers and regulators.

Knowledge Consolidation and Transfer

- ***Publications in 2013***

- Safety Case Symposium Proceedings
- Report on Natural Analogues in Rock Salts

- ***Outreach, presentation and stocktaking***

- The safety case flyer serves as the model for an on-going series of flyers. A flyer on “Uncertainty and Sensitivity Analysis” will be issued in 2014
- Continue monitoring of the TDB project.
- Participate in, and support RWMC projects, as needed. E.g. work on Records, Knowledge and Management (RK&M) and Extended Storage and Disposal.
- Continue to update the IGSC webpages with the latest information of the IGSC.

WORKING PARTY ON MANAGEMENT OF MATERIALS FROM DECOMMISSIONING AND DISMANTLING (WPDD)

INTRODUCTION

The WPDD serves as the main technical advisory body to the RWMC on decommissioning of nuclear facilities. The focus of its work is on methodologies and strategies for the analysis of decommissioning policy, strategy and regulation, including the related issues of management of materials, release of buildings and sites from regulatory control and associated cost estimation and funding. Beyond policy and strategy considerations, the WPDD also reviews practical considerations for implementation such as techniques for characterisation of materials, for decontamination and for dismantling.

The NEA Co-operative Programme for the Exchange of Scientific and Technical Information Concerning Nuclear Installation Decommissioning Projects (CPD) is a joint undertaking under Article 5 of the NEA Statute. It is independent from the WPDD, working under its own Agreement which ensures confidentiality of the information exchanged. The current 5-year Agreement expires end of December 2018.

Reference Documents

WPDD Mandate (extended until 2016)

NEA/RWM(2013)2/PROV

The CPD is a Joint Undertaking under article 5a of the NEA statute, based on an Agreement between participants. The current Agreement covers the period 01 January 2014 - 31 December 2018. The Agreement may be extended thereafter for such further periods of time as are agreed by the Participants.
(Not available on OLIS)

Core Group Members

WPDD chairperson is Juan-Luis Santiago (ENRESA, Spain). Members of the Core Group are: Rateb Abu-Eid (US-NRC, USA), Anna Clark (NDA, UK), Henrik Efraimsson (SSM, Sweden), Bernhard Massing (BMU, Germany), Doug Metcalfe (NRC, Canada), Jean-Guy Nokhamzon (CEA, France), Andrew Szilagyi (US-DoE, USA) and Ivo Tripputi (SOGIN, Italy).

CPD Management Board

CPD chairperson is Ivo Tripputi (SOGIN, Italy). Members of the Bureau are: Jean-Guy Nokhamzon (CEA, France), Andrew Szilagyi (US-DoE, USA) and Robert Walthéry (Belgoprocess, Belgium).

HIGHLIGHTS 2013

- The WPDD-14 Annual Meeting was held on 18th – 20th November 2013 at the NEA, and comprised a topical session on “Preparation for Decommissioning during Operation and after Final Shutdown”.
- The DCEG held its 6th plenary meeting on 18th and 19th June 2013 at the NEA, and comprised a topical session on “Risk Analysis in Decommissioning Costing”.
- The CPD Management Board held its meeting on 21st – 22nd November 2013 at the NEA and received an application of a new decommissioning project: Chin Shan Nuclear Power Plant of Taiwan Power Company of Chinese Taipei, which application is being under consideration of the CPD Management Board. NRC Kurchatov Institute (Russian Federation) withdrew from the CPD Programme during the acceptance process.

ACTIVITIES AND ACCOMPLISHMENTS SINCE RWMC-46 (MARCH 2013)

Activities and Projects

- **Meeting of the WPDD**

The WPDD held its 14th meeting on 18th – 20th November 2013 at the NEA, which comprised also a topical session on “Preparation for Decommissioning during Operation and after Final Shutdown”.

- **Decommissioning Cost Estimation**

The WPDD Decommissioning Cost Estimation Group drafted the report on “International Peer Reviews of Decommissioning Cost Studies”. The initiative is based on the demand of some regulators for peer reviewing decommissioning costs and is also supported by the European Commission. The methodology should advise international peer review teams how to perform independent decommissioning cost peer review to improve transparency, auditability and reliability of costing. The Group also drafted the report on “Practice of Cost Estimation for Decommissioning” which summarises main approaches used in decommissioning costing.

- **Radiological Characterisation for Decommissioning**

The Task Group issued a status report, identifying and summarising the best practice for radiological characterisation at different stages of decommissioning as an important issue for the safe decommissioning of nuclear facilities.

- **Future R&D and innovation needs for decommissioning**

The WPDD Task Group on R&D Needs for Decommissioning completed over 260 page reference book which analysed R&D needs related to activities resulting in high cost, dose or significant time. Topics were prioritized within each of five themes of interest: 1. Characterization and survey prior to dismantling, 2. Segmentation and dismantling, 3. Decontamination and remediation, 4. Materials and waste management, 5. Site characterization and environmental monitoring. The report identified decommissioning techniques which have the greatest potential for future improvement through R&D and/or innovation and outlined areas which should be considered for future funding by governments or by the decommissioning industry.

- **Information on D&D Activities Internationally**

To facilitate information exchange amongst professionals, an updated version of the Sourcebook of the IAEA, EC and NEA References in Decommissioning (former Map of International Activities on

Decommissioning and Dismantling) has been published. This document is being maintained as an information reference on on-going international activities addressing decommissioning issues.

- **The NEA Co-operative Programme for the Exchange of Scientific and Technical Information Concerning Nuclear Installation Decommissioning Projects (CPD)**

The CPD Management Board held its meeting on 21st – 22nd November 2013 at the NEA and received an application of a new decommissioning project: Chin Shan Nuclear Power Plant of Taiwan Power Company of Chinese Taipei, which application is being under consideration of the CPD Management Board. NRC Kurchatov Institute (Russian Federation) withdrew from the CPD Programme during the acceptance process.

The CPD Task Group on Site Restoration has drafted the report on approaches and techniques concerning restoration of nuclear sites. The report also reviewed a number of selected case studies on the subject.

The Technical Advisory Group (TAG), through which the programme's technical and scientific exchanges take place, met twice during 2013: in Heringsdorf Germany) and in Tokai (Japan). Meetings in 2014 are scheduled for the UK and Italy.

Knowledge Consolidation and Transfer

- ***Publications and Documents***

- Report on Radiological Characterisation for Decommissioning, [NEA/RWM/WPDD(2013)2]
- R&D and Innovation Needs for Decommissioning, in-print [NEA No. 7191]
- The Sourcebook of the IAEA, EC and NEA References in Decommissioning (*former Map of International Activities on Decommissioning and Dismantling*), [NEA/RWM/WPDD(2014)1]

MAJOR AREAS OF ACTIVITY FORESEEN IN 2014 - 2015

Activities and Projects

- **Decommissioning Cost Estimation**

Within the Decommissioning Cost Estimation Group (DCEG) activities the work on methodology for peer review of decommissioning project cost and the work on practice of cost estimation in decommissioning will continue. The Group will start studying uncertainties and application of risk analysis in decommissioning costing.

- **Radiological Characterization and Decommissioning**

After issue of the Report on Radiological Characterisation for Decommissioning, the Task Group will be studying aspects of optimisation of radiological characterisation in a waste disposal perspective.

- **Nuclear Site Restoration**

After completion of the CPD report focusing on technical aspects of nuclear site restoration, the WPDD will start studying strategic aspects of the subject.

- **The NEA Co-operative Programme for the Exchange of Scientific and Technical Information Concerning Nuclear Installation Decommissioning Projects (CPD)**

Meetings of the Technical Advisory Group (TAG), through which the programme's technical and scientific exchanges take place, are scheduled to take place in 2014 in the UK and in Italy.

- **WPDD-15**

The 15th annual meeting of the WPDD will be held in October 2014.

Knowledge Consolidation and Transfer

- ***Publications Expected in 2014***

- Report on Methodology for International Peer Reviews of Decommissioning Cost Studies - a technical report prepared by the WPDD
- Report on Nuclear Site Restoration - a technical report prepared by the CPD