

**NUCLEAR ENERGY AGENCY
RADIOACTIVE WASTE MANAGEMENT COMMITTEE**

Working Party on Decommissioning and Dismantling (WPDD)

Mandate of the WPDD Task Group on Radiological Characterisation and Decommissioning

Duration: 1st January 2014 to 31st December 2015

This mandate has been approved by the WPDD Core Group at their meeting on 30 June - 1 July 2014.

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MANDATE OF THE WPDD TASK GROUP ON RADIOLOGICAL CHARACTERISATION AND DECOMMISSIONING

1. Preamble

Radiological characterisation plays an important role in the process of decommissioning shut-down nuclear facilities that ensures protection of the environment and radiation safety. At all stages of a decommissioning programme or project, adequate radiological characterisation is of crucial importance.

The radiological characterisation is a key element for planning, controlling and optimizing the dismantling and decommissioning activities including the residual materials and waste management.

Different kinds of data and other types of information have to be collected and analysed in characterisation activities. These data can roughly be divided into three categories:

- Data resulting from direct measurements and sampling analysis program
- Data resulting from calculations, for example calculations of neutron induced radioactivity and related dose rates in components and structural materials
- Plant history as operational records, incidental reports, records from plant and system surveys during operational phase.

A very important activity prior to and during the decontamination and dismantling processes is to collect and analyse data and information that is needed for the planning of decommissioning activities with impact on waste management, and for planning of decommissioning waste management itself. Experience has shown that data and information from the operation of a facility can be of crucial importance for decisions on waste management and for characterisation of radioactive waste. Some information may be hard, costly or even impossible to obtain later in the waste management process after dismantling has taken place. Thus, an optimised management of radioactive waste highly relies on the selected strategies for gathering and management of data and information, both during operation and when preparing and performing decontamination and dismantling activities.

2. Remit

The project will focus **on strategies for optimisation of nuclear facility characterisation in a waste and materials end-state perspective**, and build on previous task group findings on strategies for radiological characterisation in decommissioning of nuclear facilities summarised in *Radiological Characterisation for Decommissioning of Nuclear Installations*, [NEA/RWM/WPDD\(2013\)2](#), OECD NEA, 2013.

The main objective for the task group would be to develop a NEA WPDD STATUS REPORT on selection and tailoring of strategies for optimisation of nuclear facility characterisation in a waste and materials end-state perspective. The status report will focus on strategic approaches, issues and risks (threats and opportunities), and observations of good practice rather than providing detailed descriptions of the relevant methods or measurement technologies.

The status report should, after due approval, be issued by the NEA to serve as a reference and guidance document to promote development of best practice in this field.

The status report should identify and describe important issues and risks related to strategies for waste and materials in radiological characterisation of facilities as well as in the waste and materials management process for optimised final disposition of waste and materials. Special emphasis should be given to the issue of optimisation of collecting information, i.e. what information is really needed and when and how should it be collected/developed. Another issue that should be given thorough attention is how heterogeneous distributions of radioactive substances, detected or suspected, should be quantified as well as managed when designing characterisation programmes, in order to be able to show compliance with waste acceptance criteria.

The topics Data Quality Objectives, screening of available and potential information, optimised characterisation planning as well as how to secure the traceability and quality of the information will have central positions in the report.

As reference and background material, the status report should describe how these and other important issues and risks are handled in different countries and give answers to relevant questions, i.e. what are the regulatory requirements, established methodologies, industrial standards, what accuracy and precision is required (and why), what lessons have been learned in the area, etc.

The ultimate goal should be to identify and present examples of best practice and to point at areas that could or should be developed further by international cooperation and coordination. Potential areas for research and development will be highlighted.

3. Description, mode of operation, and membership

The Task Group on Radiological Characterisation and Decommissioning will report to the Working Party on Decommissioning and Dismantling (WPDD). The Task Group will be discipline oriented, comprising experts in the field of characterisation for decommissioning, nominated by the member organizations of the WPDD. This representation will be wide-ranging, including policy makers, regulators, implementers and specialists.

The work is proposed to be structured as follows:

1. Identification of different needs and objectives on the topic. Thereby, several different kinds of important parameters and aspects can be identified¹. Identification of stakeholders involved in (or interested in the results of) the topic of the task, stakeholder objectives and examples of participation.
2. Performance of international survey by a questionnaire and/or interviews to gather practical examples, including the implementation or use of the results of the project and lessons learnt as well as insights and ideas how the area can be further developed².
3. Identification and description of regulations, standards and guiding documents.
4. Identification and comparison of strategies for planning and performing the activities related to the topic as well as for management and analysis of data and other relevant information.

1. For example one set of information is highly needed for preparation of a preliminary decommissioning plan. Later in the project life cycle the need for more detailed information may vary significantly, based on the country-specific waste management infrastructure and waste management routes depending on country policies, strategies, regulation (clearance, categorization of wastes, application of radioactive waste volume reduction/decontamination techniques, disposal specifications etc.).

2. Concerning questionnaires, care should be taken to select targeted experts to be approached. References should also be asked for information given in answers to questionnaires, to enhance transparency.

5. Identification and comparison of approaches for reporting of results and how the results and the general knowledge is maintained over a longer period of time (up to disposal of the waste or in some cases closing of the repositories).
6. Hosting of an international workshop on the topic (OPTIONAL).
7. Analysis of pros and cons of different approaches.
8. Identification of best practice and areas of further development or international coordination.

Most of the work should be performed within the task group in meetings. Work on items 3 and 5 should be supported by a consultant who should take part in most of the task group meetings and prepare the draft report.

The preparation of the report will be supervised by the working group chairman and the rest of the task group. The chairman would also be in charge of:

- Collecting contributions and preparing the documents submitted to review or approval by the working group
- Preparing the meetings of the working group
- Reporting to WPDD

As different specialties should be involved in the working group, contributor leaders can be identified within the working group to deal with specific topics.

Two task group meetings a year should be held in the NEA Offices. The other meetings should be conference calls or over video link.

The synergies with work of other groups should also be explored and acknowledged, e.g. WPDD-DCEG, WPDD-TGNSR within NEA, as well as other organisations. There may be several fora dealing with characterisation of waste which might give valuable input to the work.

4. Proposed composition of the task group

Proposed participants of the task group are the following:

- Arne Larsson, Studsvik, Sweden (proposed chairman of TG)
- Caroline Andrieu, EDF, France
- Yvon Desnoyers, Geovariances, France
- Denis Pombet, ANDRA, France
- Pascale Roux-Nedelec, ANDRA, France
- Michael Knaack, TÜV NORD, Germany
- Massimo Altavilla, ISPRA, Italy
- Daniela Manes, SOGIN, Italy
- Nieves Martin Palomo, ENRESA, Spain
- Alister A. Dunlop Sellafield Sites, UK
- Peter Orr, Environment Agency, UK
- Bobby Abu-Eid, NRC, USA
- Andy Szilagyi, DoE, USA

Other specialists from NEA Member Countries are invited to join the task group.

5. Schedule for the work

- Secretariat will implement the RCD TG comments and inform the WPDD Core Group about the Terms of References by the end of May 2014.
- NEA secretariat will organise a kick-off meeting as a teleconference in early July 2014.
- The first RCD TG face to face meeting, the start-up meeting, is planned for mid-September 2014.
- The Workshop (OPTIONAL) is likely to take place in 2015.
- Status report/topical session presentation at WPDD-16 meeting in November 2015 (The Topical Session is submit to WPDD CG approval).
- Draft report to WPDD Core Group in spring 2016.
- Final report on WPDD-17 meeting (2016). Closing of the project on WPDD approval (end of 2016).

6. Duration of the mandate

The mandate cancels and replaces previous mandate [[NEA/RWM/WPDD\(2010\)12](#)]. The mandate expires on 31 December 2015. The mandate may be reviewed by the WPDD at its annual meeting in 2015.
