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INTERNATIONAL ATOMIC ENERGY AGENCY

## MEETING REPORT

# DECOMMISSIONING TERMINATION WORKING GROUP

*“Use of safety Assessment in Planning and Implementation of decommissioning  
of Facilities using radioactive material” (FaSa Project)*

*Second Joint FaSa Meeting, 7-11<sup>th</sup> December 2009,  
Federal Ministry for the Environment, Nature Conservation and  
Nuclear Safety, Bonn (Germany)*

A C D Hart (UK), Chairman, DT Working Group

*(December 2009)*



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## **1. Introduction**

This meeting of the Decommissioning Termination Working Group (DTWG) was part of the second joint meeting of FaSa. The meeting took place on the second day (Tuesday).

## **2. Meeting objectives**

The meeting objectives were to:

- Discuss the draft DTWG chapter of the FaSa report, and in particular resolve key issues remaining from the drafting process;
- Plan the further development of the draft chapter, leading to a WG-agreed version for wider FaSa review in Q1 2010.

The meeting was chaired by Dr Anthony Hart (UK); no formal agenda was used as the focus was on document drafting.

A list of the WG participants is provided in Appendix A. Agreed Terms of Reference for the Group are attached in Appendix B.

## **3. Work performed**

Building on the work carried out by e-mail since the drafting meeting in April, and in line with the agreed Terms of Reference (Appendix B), the WG further refined and developed the document, focussing on key outstanding issues:

- Reconciling the three approaches to termination “safety assessment”
- Agreeing the line taken on the definition of “decommissioning termination”
- Expanding the sections on Scenario Modelling and Multi-Facility Sites
- Resolving the debate on what information should be sent to the regulator

All these issues were satisfactorily resolved, either through document re-drafting during the meeting or agreeing a strategy for their resolution. No other significant issues were identified (e.g. issues passed to this WG from other WGs were resolved during our discussions on these issues; no issues were identified that need to be addressed by other WGs).

We also discussed, section by section, all of the draft except Section 5.4 (Institutional Controls, which was not discussed due to time limitations), focussing on high-level aspects. Outstanding typographical and style comments were not discussed and so will be submitted as part of the next revision to the draft.

As part of these discussions, the WG agreed an approach to the definitions needed for consistency within this chapter. These definitions have since been included within the draft FaSa Glossary (see Appendix C), thereby addressing the FaSa Coordinating Group’s action to provide a Glossary contribution.



The WG agreed that there was no need for a further meeting to progress the draft before the next (November 2010) Joint Meeting, i.e. we expect to be able to address comments from other WGs by e-mail.

The WG agreed that Olivier Lareynie would become Chairman once the group has agreed the draft chapter, with Vik Winspear Roberts replacing him as deputy Chairman. These changes have been necessary as Anthony Hart now needs to withdraw from FaSa in view of his wider work commitments.

#### **4. Work plan**

The draft chapter is now more than 90% complete. To achieve a Working Group-agreed version we will need to:

- a) Produce an updated draft in line with the decisions of this meeting (V Winspear Roberts, before Christmas);
- b) Comment on the updated draft (All WG members, before 31<sup>st</sup> January 2010)
- c) Issue the agreed DTWG chapter to FaSa (A Hart, supported by V Winspear Roberts, February 2010)

#### **5. Recommendation**

The definitions developed by the DTWG during this week for use in our report chapter are of potential use more widely with IAEA. We therefore make the following Recommendation:

1. IAEA is invited to consider the new / amended definitions proposed in Appendix C for “Decommissioning Termination”, “site”<sup>1</sup> and “release from regulatory control” for possible inclusion in a future issue of its Glossary.

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<sup>1</sup> We recognise that the definition of the term “site” we have proposed is too narrow for wider use. Specifically, we suggest instead that this is a definition of “decommissioning site”; however we did not wish to use this more exact (but cumbersome) term within our chapter.



## **Distribution**

- DTWG participants and volunteers
- J Kaulard, Chairman, FaSa Project
- A Bassanelli, NPP Test Case Working Group
- K Lauridsen, Research Reactor Test Case Working Group Chair
- A Cadden, Mining and Milling Test Case Working Group Chair
- A Halle, Fuel Fabrication Test Case Working Group Chair
- P Francois, Decommissioning Conduct Working Group Chair
- P Manson Decommissioning Planning Working Group Chair
- M Pennington, Safety Assessment Implementation Working Group Chair
- D Orlando, Review Working Group Chair
- V Ljubenov, IAEA Scientific Secretary
- J Rowatt, Unit Head, IAEA Decommissioning and Radiation Unit
- FaSa website

Anthony Hart, 10<sup>th</sup> December 2009



## Appendix A

### LIST OF PARTICIPANTS

Bob Barker	Canada
Audrey Halle	UK
Anthony Hart	UK, Chairman
Yukihiro Iguchi	Japan
Kremena Ivanova	Bulgaria
Kerstin Kuehn	Germany
Olivier Lareynie	Spain, Vice Chairman
Nick Orlando	USA
Jose-Luis Revilla Gonzallez	Spain
Alexandru Rodna	Romania
Stefan Thierfeldt	Germany
Vik Winspear Roberts	UK



## Appendix B

### ***Decommissioning Termination***

The term “*decommissioning termination*” covers the technical and administrative actions implemented after the end of dismantling operations. At the decommissioning termination stage, the aim is to demonstrate that the end state, as defined in the decommissioning plan, has been successfully reached.

The Decommissioning Termination Working Group will:

- Document Member State experience in regard to decommissioning termination; and
- Provide guidance to assist the planning, conduct and implementation of activities directly related to operator applications to terminate a licence (i.e. build upon the guidance provided in Safety Guides WS-G-5.1 and RS-G-1.7).

In order to achieve this, the Decommissioning Termination Working Group will need to work alongside / interface with the Decommissioning Planning, Decommissioning Conduct, Decommissioning Implementation and Review of Implementation, Modifications and Evolutions of Safety Assessment Results Working Groups, and avoid duplication of activities. As a guide, FaSa project work will fall within the remit of the Decommissioning Termination Working Group if it relates *directly* or *predominantly* to the activities undertaken by an *operator* when applying to terminate a licence. For instance, work undertaken by the operator to demonstrate that its proposed end states will meet relevant criteria will fall within the remit of the Decommissioning Termination Working Group even though this is formally part of the operator’s decommissioning planning. However, the planning and conduct / implementation of the activities needed to achieve these end states would not be included within the remit as they are neither directly nor predominantly relevant. Equally, activities associated with the regulatory review of an application to terminate a licence would not fall within the remit as these are not undertaken by the operator.

Other matters beyond the remit of the Decommissioning Termination Working Group (i.e. to be addressed by the Decommissioning Planning and Decommissioning Conduct Working Groups) include:

- the selection of the end state, taking into account all relevant parameters: e.g. facility characteristics and operating history, availability of waste disposal, reuse options, national regulations...;
- the management of changes to the proposed end state during the conduct of decommissioning.

It should be noted that this remit extends slightly wider than the general objective to consider the implementation and evolution of safety assessments.

In order to achieve the above, the Decommissioning Termination Working Group will investigate Member States’ experience of:

- (i) methodologies implemented by operators to demonstrate that an appropriate end state has been achieved;



- (ii) licence termination applications, including the documentation required by the regulatory body (e.g. long term impact assessment/safety assessment, final decommissioning report, feedback experience);
- (iii) facility/land use after release (e.g. restricted or unrestricted use, termination of a licence for the purpose of a new one)
- (iv) the implementation of institutional controls.

However, Member States' experience of matters such as:

- (i) regulatory review of licence termination application (e.g. documentation, on site inspections and radiological measurements etc);
- (ii) results of regulatory review, including what do when release criteria are not met;

will instead be addressed by the Review of Implementation, Modifications and Evolutions of Safety Assessment Results Working Group.

During the project, participants in the decommissioning termination Working Group will be expected to contribute by sharing their practical experience, ideas or suggestions on approaches on decommissioning termination and achieving termination of a licence.

#### • **Outcomes**

The work produced by this Working Group will be used as input into other working groups of FaSa project, particularly the Decommissioning Planning Working Group and the Test Case Working Groups. The outcomes of the Decommissioning Termination Working Group will be used in the development of the main project report (Safety Report) that will consolidate the inputs from all project Working Groups. The relevant section of the draft project report will be initiated in Step 1, updated in Step 2 and finalised in Step 3 of the project. The bulk of the work of this Working Group should however be completed by the end of Step 1.

The Decommissioning Termination section of the FaSa project report will, at a minimum, document Member State experience and provide supporting detailed guidance to address the following high-level questions:

1. What range of national legal / regulatory frameworks and approaches is employed associated with licence termination applications?
2. What activities should operators undertake (e.g. analysis, on-site measurements / surveys etc) to demonstrate that the end state will be (or is) appropriate (e.g. in accordance with relevant criteria)?
3. How do multi-facility site considerations affect the activities undertaken by operators (e.g. what extra needs to be done; what aspects are not needed for a multi-facility site)?
4. What requirements (institutional controls) could be necessary for a site to be released under restricted use conditions?
5. What information should operators supply to the regulator, when applying for a licence termination, to justify that the end state will be (or is) appropriate?





Each high-level question addressed needs also to consider the extent to which a graded approach could be followed and the influence non-radiological aspects might play.

- ***Interfaces with other Working Groups***

In addition to the above interfaces, the Decommissioning Termination Working Group will coordinate its activities with those of the parallel Test Case Working Groups (see Appendix A<sup>2</sup>).

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<sup>2</sup> Appendix A of the FaSa Terms of Reference document.



## PROPOSED CONTRIBUTION TO FASA GLOSSARY

## Appendix C

*Decommissioning* Administrative and technical actions taken to allow the removal of some or all of the regulatory controls from a facility

Decommissioning typically includes dismantling of the facility (or part thereof), but in the IAEA's usage this need not be the case. A facility could, for example, be decommissioned without dismantling and the existing structures subsequently put to another use (after decontamination).

The use of the term decommissioning implies that no further use of the facility (or part thereof) for its existing purpose is foreseen.

(IAEA Glossary)

*Decommissioning Plan* A document containing detailed information on the proposed *decommissioning* of a facility.

(IAEA Glossary)

*Decommissioning Termination* The technical and administrative actions implemented at the end of *decommissioning* associated with the *release from regulatory control* of a *site* (or part of a *site*).

(Proposal from FaSa DTWG)

*Institutional Control* The controls placed on a *site* that has been *released from regulatory control* under the condition of observing specified restrictions on its future use to ensure that these restrictions are complied with.

(IAEA Glossary)

*Licence* Any authorization granted by the regulatory body to the applicant to have the responsibility for the siting, design, construction, commissioning, operation or *decommissioning* of a nuclear installation.

(IAEA Glossary)

*Release from regulatory control* The termination of the *licence* granted for the purposes of the use of radioactive material (including *decommissioning*) and the end of the associated regulation of nuclear material and / radiological safety, noting that other forms of regulation (e.g. for environmental or planning purposes) may continue.

(Proposal from FaSa DTWG)



*Site*

Land, together with any buildings or other structures, proposed for  
*release from regulatory control*, as defined in the *decommissioning plan*  
(From Footnote 2 to WS-G-5.1 and augmented by FaSa DTWG)