

18th EAN Workshop

Introduction to Working Groups

"ALARA for Decommissioning and Site Remediation"

Institut de Chimie Séparative de Marcoule (ICSM), CEA-Marcoule, France, 11-13 March 2019

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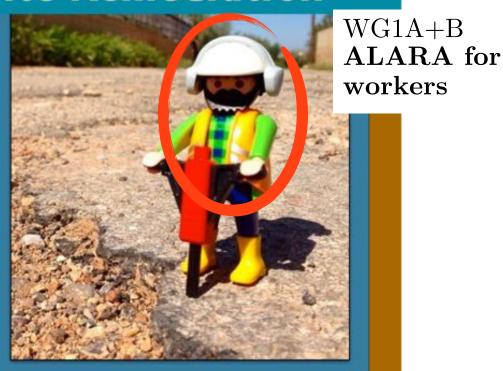


ALARA for Decommissioning and Site Remediation

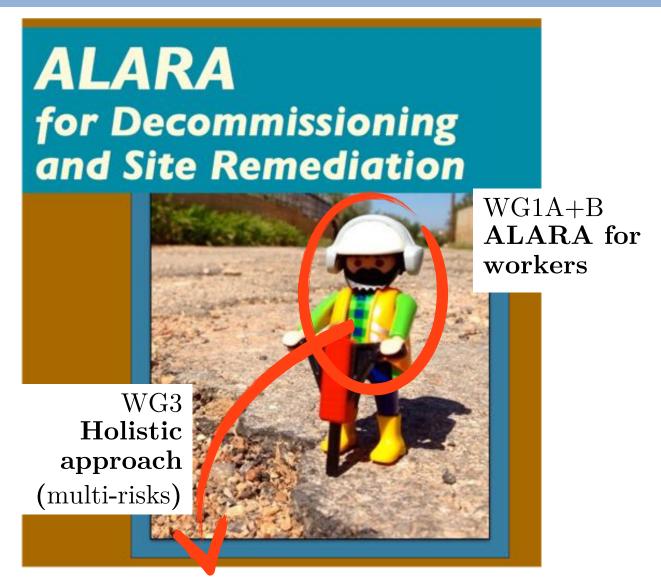




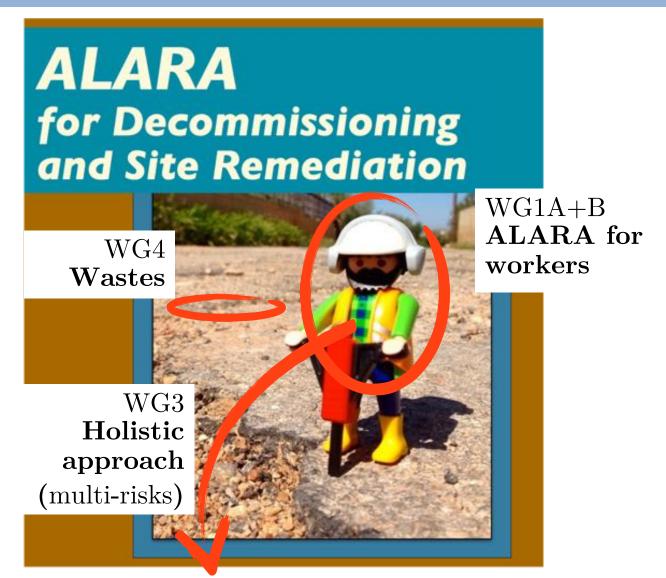
ALARA for Decommissioning and Site Remediation













Working Group: space & time

⇒ WG1A: auditorium

Mr. Antoine

⇒ WG3: room A1-09

Mr. Neukäter

⇒ WG1B: room A1-8

Mr. Ranchoux

⇒ WG4: room A-11b

Mr. Rehs

- • Monday: 15:00-16:45 (after coffee break)
 - (round table), intro, choosing a **Rapporteur**,
 - preliminary discussions

(+ night thoughts)

- Tuesday: 14:00 16:30 (including coffee break)
 - Discussions, preparation of recommendations (.ppt)
 - Brief meeting with EAN representatives (material shall be provided)
- Wednesday
 - ⊕ 9:00 10:20: WG report back (~ 20'/group)
 - \oplus 11:00 11:45: Workshop conclusions & last discussions



Some thoughts...

Topic 1 – How to apply ALARA for workers in decommissioning and site remediation?

- What are the challenges in applying the steps of ALARA?
 - Access to workplaces not accessed?
 - Characterization?
 - Dose estimation? (time ++ with dose rate --)
 - Selection of the protective actions?

– ...

- 'Nuclear sector' vs. 'non-nuclear sector'?
- Influence of the strategy (immediate vs. deferred vs. entombment)?
- Recommendations: technical? organisational? training? ... addressed to who?

Topic 3 – How to be ALARA in the context of other risks?

- Work activities with inter-dependencies: need for coordination, but how?
- Mixed risks
 - RP + industrials + civil engineering + contaminants + ...
- How to decide which is predominant ... in a changing context?
- Consequences of a non-holistic approach?
- Recommendations: risk assessments? organisation? ...



Some thoughts...

Topic 4 – The challenges raised by wastes and how to overcome?

- What strategy for what waste?
- Factors to be considered:
 - Type of waste;
 - Properties (hazardous?);
 - Volume;
 - Treatment options;
 - Clearance (if possible);
 - End state;
 - 'Stakeholders';
 - Environment;
 - **–** ...
- How to optimise the characterisation?
- How to decide the "best" solution (ALARA? de minimis? benefit > 0?) considering resources, safety, environment and ethical aspects?



Some thoughts...

Questions are provided (to start)

Not new questions ... but still at stake!

You cannot solve the whole topic ⇒ optimise!

Select key themes and investigate

<u>Do not</u> limit yourselves with the recommendations

Discuss & Exchange





Optimisation Procedure – Step by Step

Description of work to be performed Tasks sequence / Work areas / Workplaces Radiological risks analysis

Review of input data needed for the initial dose assessment (doserates, working time,...)

Initial Dose Assessment

ALARA Analysis

ALARA Synthesis

Operational follow-up = > to check if the optimisation procedure is well implemented

Follow-up & Feedback experience
Performance analysis. Comparison with
objectives. Gap & Mishaps analyses. Proposals
for corrective actions

Analysis of occupational Doses *Where? When? Who? How?*

Identification of Protective Actions that can (or cannot) be implemented

Protective Actions Efficiency

Impact on doses - Other impacts

Selection of Protective Actions

Identification of Decision Criteria

Hierarchization of actions

Sensitivity Analysis