[PRACTICE]

D5.11

GUIDANCE DOCUMENT, WASTE STORAGE

CRITERIA FOR THE SELECTION OF TEMPORARY WASTE STORAGE FACILITIES

PRACTICE WP5 deliverable

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Summary Work Package 5

The overall aim of the project “Preparedness and Resilience Against CBRN Terrorism using Integrated Concepts and Equipment” (PRACTICE) is to improve the ability to respond to and recover from a Chemical (C), Biological (B), Radiological (R) or Nuclear (N) incident. The objective of the project is to create an integrated European approach to a CBRN crisis – i.e. a European Integrated CBRN Response System. This will be achieved through the development of an improved system of tools, methods and procedures that is going to provide EU with a capability to carry out a truly integrated and coordinated operational reaction following the occurrence of a CBRN crisis, whether it is caused by a terrorist act or an accident.

The objectives of WP5 are to develop, integrate and test a complete toolbox for first responders, decision makers and the public, including innovative components developed during the project to provide an improved and integrated preparedness and response to CBRN events.

The tools will be organized in 6 categories:

1. Recommendations
2. Standards
3. Protocols / procedures
4. Equipment and systems (eventually simulated): hardware, software, with performances, Technology Readiness Levels (TRLs), validation/certification status
5. Simulated environment (with 3D databases)
6. Real equipment and system emulation capabilities.

These tools will fulfil functions as defined in WP3, organized in line with the ESRAB/Staccato taxonomy functions, completed and detailed when needed for PRACTICE. The toolbox should be considered as living system gathering “bricks” into an integrated solution to manage a CBRN crisis. It will include actual tools and equipment and ICT simulated environments including hardware and software. This will allow plugging and playing new components and guarantee their interoperability.

The toolbox will be developed and integrated in two steps:

- A V0 version integrating in an innovative way existing validated capabilities (fed from WP 2 and WP 3) i.e., tools, methods and procedures that will be put together into an information system, with specified standard interfaces.
- A V1 version integrating innovative tools, methods and procedures and supporting future standards to improve interoperability and consistency without impeding the existing operational systems.

Developing V0 and new CBR tools for V1 will be an iterative process with all the stakeholders in the loop. Focus will be put on specifying simple interfaces for any supplier to describe and present

its "bricks" in order to "index / reference" them in our PRACTICE Toolbox Information System. Any new tool that satisfies the "standards" interfaces should be easily added to build new solutions ("buildings").

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1. Executive Summary

During the Recovery Phase[1] after a Chemical, Biological or Radiological (CBR) type incident which contaminated assets in locations under either private or public ownership, temporary storage of waste could provide a "buffer" such that recovery can proceed unhindered by the logistics of final waste disposal.

The European Waste Framework Directive and related legislation provides a framework by which temporary storage may be permitted with reduced administrative burden compared to longer term or semi-permanent storage.

The purpose of this document is to present criteria that organisations may use to assess their own facilities[2] to identify if they are likely to meet acceptance and approval from the relevant authorities as temporary waste storage facilities[3]. As there is currently no formalised process for acceptance of temporary waste storage facilities, consideration of these criteria will assist in securing appropriate arrangements, but of course cannot guarantee acceptance. A typical user of the criteria that are presented could be a Facilities Manager, who is seeking to find a suitable storage location for wastes that are being produced by his remediation subcontractor, pending identification of a disposal route. Extreme incidents, or those involving contamination of open places and public assets, may require additional and more detailed considerations than those presented here, although the criteria that are presented will still provide a robust starting point.

An examination of a number of example scenarios shows that temporary storage could range from:

i) simple expedients like wrapping in polythene or placing in drums which are then placed within ISO freight containers in a secure area…to,

ii) packaging of wastes and transporting them to a disused hangar/ suitable building on a secure site.

A consideration of the timelines involved in a remediation project and the plans presented in PRACTICE Deliverable D5.12 "Remediation Plans and Templates" indicates that planning for temporary waste storage needs to take place as early in a remediation project as is practicable. In the planning process it may also be possible to identify potential temporary facilities in advance or to arrange 'call-off' contracts or framework agreements with suitable providers.

Criteria

Four Key Criteria are identified, namely that the storage site is safe, practicable, acceptable and cost effective. The criteria are not completely independent; assessment of a particular site against them may require an iterative review as various sub-options are considered.

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[1] See PRACTICE Deliverable D3.1 "Survey Methodology"
[2] Or those made available to them
[3] The selection, licensing and justification of sites for permanent storage is not covered by this document, it is the subject of various EC Directives.

By considering the issues associated with each of the Key Criteria and in particular the one of Safety, a number of sub-criteria have been identified. Previous studies on specific waste storage sites and best practice guidance from publish standards – such as those for storage of radioactive and biological wastes – have also been used to identify sub-criteria.

For the consideration of the criterion of safety, a risk based approach is recommended; i.e. the acceptability of the performance of a candidate site should be judged based upon the frequency and likelihood of an adverse situation arising. This approach is widely used across Europe.

The sub-criteria and associated guidance notes are presented in an Annex to the main report.

The importance of the inclusion of stakeholders in the assessment of candidate sites, against the criteria, has been identified.