

Waste from maintenance and dismantling of nuclear facilities



Surface disposal of very-low-level radioactive waste.

Deconstruction worksites of decommissioned nuclear facilities

- ➔ *The maintenance of nuclear facilities and their dismantling, once their operating life is over, generate radioactive waste of various kinds:*
- > *In activity level, for instance between waste originating from containment envelopes and waste resulting from the reactor core itself;*
 - > *In bulk and weight, for instance, between concrete rubble and huge metal components, such as reactor vessels;*
 - > *In gross waste volume, for instance between concrete waste from containment envelopes and waste resulting from filtration systems.*
- Depending on their physical and radiological characteristics, maintenance and operational waste will be directed towards different waste management processes. However trade-offs must be analysed before any decision on the process is taken (for instance between direct disposal of the waste or prior processing).*

Methodology

- > Quantitative and radiological inventories to be identified;
- > Inventory work at every deconstruction step: electromechanical dismantling, cleanup of concretes, followed by dismantling and demolition, and specific treatment proposal;
- > Technical and economic analyses;
- > Waste-treatment specifications in partnership with waste producers;
- > Packaging specifications in partnership with waste producers;
- > Waste-acceptance criteria, waste-compliance control specifications;
- > Development of adapted disposal facilities fulfilling regulatory requirements;
- > Construction, operation and final closure of disposal facilities;
- > Prospective economic studies;
- > Consistency studies between forecast inventory and existing disposal solutions.

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Andra Disposal Solutions

➔ *Andra is responsible for managing all radioactive waste produced in France.*

The Agency has already worked on a large number of dismantling issues, such as:

- > The identification of a quantitative and radiological inventory of very-low-level dismantling waste, followed by the design and operation of adapted disposal

facilities for very-low-level waste (CSTFA) and for low-and intermediate-level waste (CSFMA) in the Aube district;

- > The analysis of an adapted system for PWR vessel heads, followed by the acceptance of that type of waste at the CSFMA.

- > The analysis of the adequate waste management system for:
 - PWR steam generators;
 - PWR vessels.



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1• Rubble produced when dismantling a nuclear facility

2• Disposal cell for waste packages at the CSTFA under its mobile roof

3• Internal view of a disposal cell at CSTFA

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