

Implementation of safety assessment by Danish Decommissioning

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The paper hierarchy

- General decommissioning plan comprising all facilities on the site
- EU Article 37 report
- EIA
- Decommissioning plan for a specific facility
- Work plans for individual decommissioning operations



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The paper hierarchy (2)

- ISO 9001:2008 certification
- Safety documentation
- Conditions for Operation and Decommissioning
- Final reports from completed decommissioning projects, including “lessons learned”



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Overall decommissioning plan

- The framework for the entire decommissioning project
- Establishes the strategy, e.g. including the sequence of the facilities to be decommissioned
- Issued and approved in 2004
- A more or less static document



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Overall plan related documents (1)

- Application for the establishment of a clearance laboratory
- Application for the establishment of a measuring laboratory for waste characterisation
- Application for the establishment of an intermediate storage facility for radioactive waste



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Overall plan related documents (2)

- Information on waste flow from demolition to release or intermediate storage
- Information on waste documentation
- Information on the quality management system (processes and certificate)



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Overall plan related documents (3)

- Method description and documentation regarding the release of waste
- Method description and documentation regarding characterisation of radioactive waste



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Overall plan related documents (4)

- Proposals for thresholds for the emission of radioactive substances from Risø's nuclear facilities
- Proposals for release levels for material and buildings from the decommissioning of Risø's nuclear facilities
- Safety documentation for DD



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EU Article 37 report

- Required in the European Union in order to document the potential radiological impact in other countries
- No impact foreseen in any neighbouring country



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Environmental Impact Assessment (EIA)

- Considers the local environment
- Involves stakeholder consultation, e.g. hearings



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Decommissioning plan for a specific facility (1)

- Structured according to IAEA Safety Guide No. WS-G-2.1
- Describes the approach chosen for the decommissioning of the facility
- Specifies the activity inventory based on a characterisation study



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Decommissioning plan for a specific facility (2)

- Describes specific safety issues for that facility – both radiological and industrial
- Sets out dose constraints for the work
- The plan is being commented by an international expert panel prior to submission for approval by the regulators



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Work plans (1)

- List of contents specified in the Conditions for Operation and Decommissioning
- Examples of contents:
 - Conceivable risks
 - Personal protection gear
 - Expected radiation doses
 - Dosimeters to be used



Work plans (2)

- Examples of contents:
 - Waste containers used
 - Expected quantity of radioactive waste
 - Are the Operational Limits and Conditions (BfDA) or other rules affected?
- Draft plans are commented by all involved parties before implementation.



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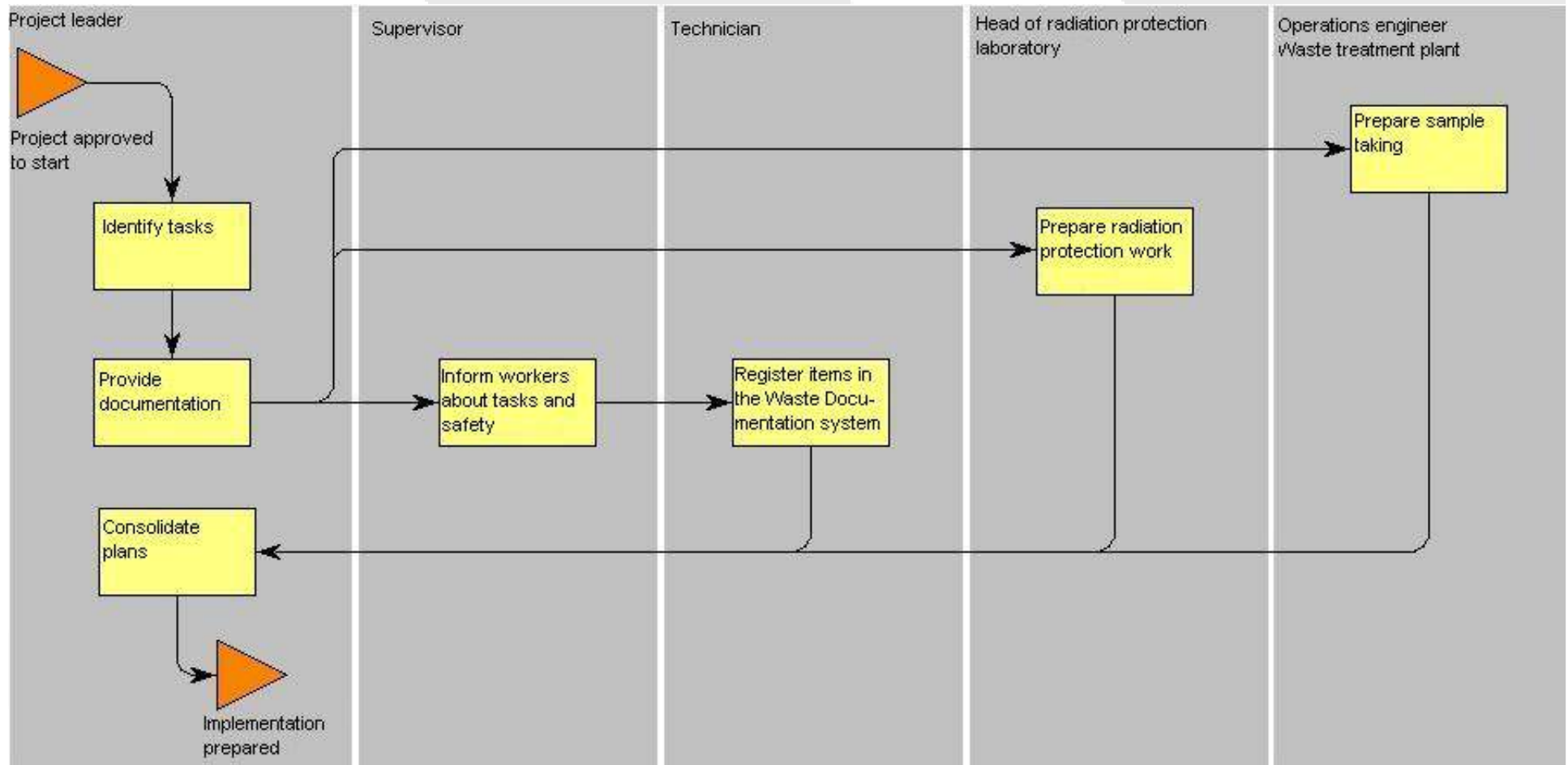
ISO 9001 certification

- Electronic QA system, comprising:
 - Description of processes
 - General instructions (concerning all aspects of DD's activity)
 - Specific project instructions
 - General reference documents
 - "Observations"



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Screen dump from the process "Prepare implementation"



Waste safety

- Electronic waste documentation system, covering:
 - Registration of waste item when dismantled (or before)
 - Physical properties
 - Activity inventory
 - Registration of all measurements on the item
 - Registration of any movement of waste item or container



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