

COGN401

Minimise and package radioactive waste



Overview

This unit deals with the following:

1. Minimise radioactive waste – this covers the competence required to ensure that radioactive waste arisings are minimised as required by nuclear site licences and local rules
2. Package radioactive waste – this covers the competence required to ensure efficient use of packaging materials according to formally approved operating instructions

During this work you must take account of the relevant worksite operational requirements, procedures and safe working practices AS THEY APPLY TO YOU.

Previous Version:

Adapted from Unit N401 of Nuclear Decommissioning NOS – version October 2005.

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Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety and other relevant regulations and guidelines
- P2 leave non-essential items outside active areas
- P3 follow work sequences that minimise the amount of waste generated
- P4 use tools, protective equipment, working methods and the containment process as specified for the job
- P5 use working techniques that minimise cross-contamination and airborne activity
- P6 use appropriate size reduction techniques according to **waste characteristics**
- P7 keep radioactive and non-radioactive waste separate
- P8 identify opportunities to re-use contaminated equipment and bring them to the attention of the relevant people
- P9 discuss and resolve difficulties encountered and possible improvements to specified methods with the relevant people
- P10 use the correct containment for the level of contamination involved and the physical size and scale of the **waste**
- P11 segregate **waste** correctly to the appropriate waste streams, according to its type
- P12 use **packaging** material that is compatible with the waste concerned and is confirmed as fit for purpose before use
- P13 achieve a high packing factor and use low force compaction techniques where specified
- P14 fully meet specified requirements on the movement of **waste**
- P15 use safe lifting and moving techniques to transfer waste
- P16 clearly and accurately identify packages using the required **identification system**
- P17 promptly and accurately report **packaging** and equipment defects and abnormalities and other difficulties you encounter to the relevant people

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Knowledge and understanding

You need to know and understand:

- K1 why it is important to leave non essential items outside active areas
- K2 how to determine the most appropriate work sequences to follow to minimise waste
- K3 the tools, protective equipment, working methods and containment processes to be used for different types of job
- K4 the techniques which minimise cross-contamination and airborne activity
- K5 the size reduction techniques used for different waste characteristics
- K6 factors which determine whether or not contaminated equipment may be re-used
- K7 the typical difficulties which may be encountered and who should be involved in discussions to overcome them
- K8 the key factors to consider when determining the correct method to be used for different levels of contamination and waste dimensions
- K9 radioactive waste types, their segregation and identification
- K10 the use of packaging materials (primary and secondary) with different wastes
- K11 the main reasons for achieving a high packing factor and using low force compaction techniques
- K12 waste movement requirements
- K13 safe lifting and moving techniques used in waste transfer
- K14 reporting and documentation procedures
- K15 the principles and practice of waste generation and avoidance
- K16 the principles of radiation and contamination
- K17 the principles of working area demarcation and control
- K18 the principles and techniques of risk minimisation
- K19 radioactive waste packaging methods

Additional Information

Glossary

The following terms have a specific meaning in this unit:

Waste characteristics

That which is compactable; non-compactable; sharp edged; hazardous other than radioactive

Packaging

- Primary
- Secondary

Identification system

That which is organisation-specific and will identify origin, destination and radiation level

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Suite Nuclear Decommissioning

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