

COST OF NORM MANAGEMENT OPTIONS WITH A FOCUS ON DISPOSAL



IAEA ENVIRONET NORM Project
Working Group #3



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INTRODUCTION

- NORM waste and residues management routes and solutions are extremely diverse from generation of to the selected endpoint
- They range from reuse or recycling, the most desirable solutions, to disposal in various types of facilities,
- Extensive pre-disposal treatments and conditioning operations may be required

➔ ***The diversity and sometimes complexity of the NORM residues and waste management often hampers the assessment of the liability or of their elimination costs***

OBJECTIVES OF THE WORKING GROUP

The objective of the Working Group #3 of the IAEA ENVIRONET NORM is

- to **present structured information** and examples **allowing an assessment of an estimation of the costs of managing NORM waste and residues** from generation to their selected endpoint,
- The endpoint is their clearance from regulatory control, treatment or elimination (incineration..) or disposal with the effect that they do not represent a hazard for man or the environment

TARGET AUDIENCES

- **NORM producer** or owner, looking for **optimizing the cost of management** of its residues and waste
- **Service provider** investigating the costs of **providing a NORM waste management solution** for producers
- **Waste Management organization**, administrations or other national or state officials **assessing the liability**

COSTS ASSESSMENT METHODOLOGY

Objective :

provide a cost break-down of management process to unit costs that would allow an easy assessment of the liability associated with the production or ownership of NORM waste and residues.

Method:

- **Review NORM waste and residues** types, origin and characteristics
- **Present management options**, from reuse and recycling to disposal following treatment and conditioning
- **Review the costs of each management step** (treatment, logistics, disposal, clearance...), adapted to different waste and residues types and characteristics (volumes, activity concentrations)
- **Review additional costs** (licensing fees, inventorying, record keeping...)
- **Present examples** from different industries and countries and case studies



Thank you

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