

## **International survey of management practices for NORM contaminated metal scrap.**

**Keith-Roach, Miranda<sup>1</sup>; Grundfelt, Bertil<sup>1</sup>**

<sup>1</sup>Kemakta Konsult AB, SWEDEN

### **Abstract**

This paper presents an investigation into the handling of scrap metal contaminated with naturally occurring radioactive material (NORM) in different countries and the financing of the management options applied. The objective was to provide the Swedish Radiation Safety Authority with information to support the development of guidelines for managing orphan NORM contaminated scrap generated and stockpiled in Sweden.

The study was performed in three steps. The first step involved posing open questions on the NORM and Natural Radiation discussion group page of the social network site LinkedIn. This was then followed by a review of relevant national strategies and guidelines, and the final stage involved the construction and distribution of a questionnaire to selected people in 13 countries. The questionnaire contained questions about the amount of orphan NORM contaminated metal waste handled, handling methods applied, radioactivity limits for disposal of NORM waste, methods for financing the handling options applied, importance of sustainability aspects in the handling approach selected, rules for import and export of NORM waste, and ways by which stakeholders are made aware of NORM issues and stakeholders are involved in the development of management options and legislation.

The results showed that very different approaches are taken in the countries investigated. The choice of handling system is influenced by the available infrastructure for management of radioactive waste. Other governing factors affecting the choice of handling system are radiation safety, technical feasibility and economic efficiency. Sustainability aspects that are important in conventional waste management, e.g. the waste hierarchy that prioritises reuse before recycling or disposal, have a lower priority in the handling of NORM contaminated metal waste. In most countries, the costs are covered by the holder of the waste material.