## International Conference on the Management of Naturally Occurring Radioactive Materials (NORM) in Industry



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## Transportation Requirements and Regulatory Control for the Safe Transport of Naturally Occurring Radioactive Material

The transport of NORM is now becoming an issue not just for safety, but also for security. The risks of uncontrolled activities associated with enhanced levels of NORM can be alleviated by the adoption of controls to identify where NORM is present, and by the control of NORM-contaminated equipment and waste while protecting workers.

NORM management is planned and carried out after approval of ENRRA (Egyptian Nuclear and Radiological Regulatory Authority) which is the Competent Authority for regulating safe and secure transport of NORM in Egypt. The main objective of the ENNRA is to ensure that the NORM-contaminated equipment is handled, transported, stored, maintained or disposed in controlled manner.

The main goal of the paper is to establish safe, practical and cost effective procedures associated with NORM to provide adequate protection for both human and the environment. The control procedures that are required and should be practiced associated with NORM contamination are given. An assessment of all process that identifies potential NORM contamination is provided. The requirements for the control of NORM-contaminated equipment are considered. Therefore, it is critical to understand and control how and where NORM-materials can be transported.

The requirements of ENRRA for an efficient and effective strategy for NORM survey are developed to ensure that all aspects of NORM are managed. The monitoring program based on specific requirements of ENRRA is also provided. The role of ENRRA is to indicate the required controls and actions in an efficient, practical and cost effective manner. The fields of interest include monitoring of norm, training, and awareness of workers, the factors which affect the efficiency of workers, norm contaminated waste control, protection of workers, norm management guidelines development, norm- contaminated equipment control, monitoring of compliance

ENRRA is in process of implementing a Database to store all information relevant to NORM transportation and the corresponding measure. It is used for recording the data related to Notice of all NORM transportation submitted by users allowing, in this way, to have the orientate information about the quantity of land, air and water transports of these materials in Egypt. They are recorded the following data: consignor, consignee, origin, destination, carrier, NORM material description (contaminated equipment, scale, sludge, scrapings, etc.), Volume/quantity of NORM material transported, Method of transportation, Organization/facility where the NORM waste was generated, models and approval certificates, transport index, route, starting and ending date and time, and whether security measures are required.

**Primary authors:** EISAWY, Ezzat (Head of operation Safety Dept.); Dr FAHMY, Rania (Operational Safety and Human factors Dep., ENRRA); Dr KHATTAB, Abdullah M. (Nuclear and Radiological Regulatory Authority, Egypt)

Presenter: EISAWY, Ezzat (Head of operation Safety Dept.)

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