

## Invited Presentation 8

### A NORM-SPECIFIC APPROACH TO EDUCATION AND TRAINING NEEDS IN NORM INDUSTRIES

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While NORM industries recognise a significant and growing demand for formalised education, training and CPD materials, because of the potentially distracting reference to radioactivity, there is a tendency to seek models and best practices from nuclear industries rather than from sectors to which the products of the NORM industries are more generally aligned, such as food production. Based on the FIPR/ Aleff Group phosphate industry knowledge portal **MiLo**, **MiLoRAD** marks the first step in a systematic attempt to codify and teach in a coherent and consistent way the competencies and best practices that are required in a strategic NORM industry such as the phosphate sector. While the apprentice-based, company or even site-specific model of training will continue to have its place in industries processing sources or manufacturing products containing NORM, a combination of factors make it essential to address ongoing training and professional development needs in the NORM sector in a more formal, generalized and transparent manner. This approach is essential given the rapid development of demand for NORM industry manufacturing capabilities in emerging and developing economies, some with little or no indigenous source of knowledge or experience in the domain. Such training needs are commonly faced by companies confronting the challenges of manufacturing and marketing NORM products for the first time. The paper sets out the five-tier, criterion-referenced competency and best practice model on which the **MiLoRAD** curriculum sits, sets the curriculum within the context of recruitment and HR needs in the phosphate industry and positions the benefits of such an approach within a management and operational culture focused on safety, sustainability and efficiency, and, in association with suitable national or regional centres of excellence, explores options for certification or accreditation of both individuals and operating units who have successfully completed the courses on offer. Training, CPD and wider educational needs are addressed in a combination of in situ (in post) learning, classroom and web-based course elements. The applicability of the model to other NORM industries is also explored. While the approach proposed may be historically unfamiliar in the phosphate sector, the paper argues that the change proposed is evolutionary not revolutionary. There is an added advantage to be won: if the phosphate sector aligns itself more closely to its scientific neighbours, the food and fine chemical/ pharmaceutical industries where such practices are already well-embedded as formalised Good Practices, it will be able rapidly to leverage the knowledge and experience gained to its own economic and qualitative advantage. It will also be able to adapt the cardinal principle of informed

consent into its own dialogue with customers and stakeholders, especially in regard to risk perception regarding NORM and heavy metals in its products.