Proposal for the IAEA MODARIA II Programme (2016–2019)

NORM and Legacy Sites
Safety Assessment in Support to Remediation

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for WG3 participants
Underlying problem to be addressed by the proposal

For safe remediation of legacy sites and facilities contaminated with NORM and artificial radionuclides a number of safety assessment have to be made to answer the following questions:

- Do associated risks justify remedial measures?
- What are the preferred remedial options?
- Can it be demonstrated that the preferred remedial option can be safely implemented?
- Can long term safety be demonstrated?

Improvements of methodologies and tools developed in MODARIA I are still required
Aims and Objectives

• To upgrade the methodologies and modelling tools developed in the MODARIA I Programme.
• To apply the methodologies and tools to existing legacy sites and facilities – considering regulatory requirements.
• Training of end users (regulators, operators, other) in the use of the methodologies.
Main working steps

**Improvements to SA methodology:**

> Develop a FEP list for mining and other NORM facilities and activities and derive relevant scenarios.

**Improvements to assessment models included in NORMALYSA:**

> New models (source term), seasonal effects, integrated models, parameter values for different situations (WG4), additional radionuclides, chemicals?

**Further intercomparison of models:**

> Sensitivity and uncertainty analyses (WG5).

**Application to existing sites and facilities:**

> Case studies by operators and regulators – including decision making methodologies developed in WG1.

**Training of end users:**

> Hands on training during meetings.
Expected results and benefits

• Upgraded methodologies and modelling tools
  – internationally harmonized

• Verification protocols for models
  – confidence building

• Reports from application to real cases
  – reference cases

• Training materials
  – for self study and use in training events

• Trained end users
  – training of trainers