

Summary for WG2 – Reference approaches to modelling for management and remediation of “NORM and legacy sites”

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Setting up the WG2

- Suggestion welcomed at the last EMRAS II meeting
- First WG meeting took place in Vienna in September 2009
 - 23 participants from 17 countries
 - Summary of outputs from EMRAS I NORM group
 - Sites from 7 countries presented
 - 6 environmental models presented
 - Challenges for authorities related to management and remediation of NORM and legacy sites presented from several countries
- Similar challenges in many countries – NORM and legacy sites that need better management and/or remediation, but national regulations and guidance are often not well suited for this purpose. Many models available, but how suitable are they for different purposes and conditions?

Work done September 2009 – January 2010

- Gathering of site specific data (to be presented this week) to be used to compare and contrast different models
- Drafting a General Assessment Methodology Process, as a basis for a guidance document on risk and environmental impact assessments models to be used in the safe planning and implementation of remediation options
- Planning a joint site visit and meeting for WG2 in May 2010 in France: old uranium mining sites next to Bessines-sur-Gartempe (IRSN, AREVA)

Model questionnaire

- Questionnaire circulated requesting information on models (applicable to NORM/legacy)
- Information requested on
 - Model name
 - Model type
 - Application
 - Transport processes modelled
 - System dynamics
 - Endpoints calculated
 - Limitations
 - Method for analysing uncertainty (if relevant)
 - Participant - name/institute (D –developer; U – User)
 - Other comments

Response - overview

- 'Specific' models
 - RESRAD-Offsite; PC-CREAM; CROM; COMPLY; ROOM; CARAIBE; CITRON; PRG for Radionuclides; IAEA SRS-19; ERICA Tool
- Modelling Tools/environments
 - AMBER; ECOLEGO
- Responding participants will run one or a combination of these models

Information requested on national regulations

- Policy on environmental and human health protection, and industrial safety in relation to strategic objectives for final end-state for remediated NORM and legacy sites
- National law on safety requirements, etc., intended to support achievement of national policy.
- Technical and derived standards.
- Guidance documents explaining how to comply with technical and derived standards
- Rules developed by operators for internal operation within their organisations, by which control is exercised.

Examples from:

- Brazil
- France
- Bulgaria
- Belgium
- Canada
- Russia
- UK
- USA

Different style of regulation adopted in different countries, but similar radiation protection objectives.

(More details to be presented during the WG2 meeting)

This week, we plan to....

- Have a closer look at suitable site specific data
- Discuss possibilities for model-model intercomparison in relation to remediation
- Look at the variations in national regulations and guidance
- Look at the determination of criteria for possible land use
- Discuss the General Assessment Methodology Process
- And more....

(64 people from 33 countries are now on the WG2 mailing list)

Global Uranium Mining and Milling Waste

(million t., UNSCEAR-2000)

