

EMRAS

Environmental Modelling for Radiation Safety

NORM

Working Group

Slow progress to date

Compiled a list of NORM producing industries

Compiled a list of models which might or might not be useful

Preliminary look at some possible scenarios

NORM Industries

Almost every country has some industries producing wastes
or commodities containing NORM

Mining (uranium, mineral sands, coal, copper, aluminium,....)

Mineral processing (uranium, rare earths, copper,
aluminium,...)

Phosphate industry

Oil and gas production

Generation of electricity from coal

Some industries are under regulatory control, some are not

This varies from country to country

Legacy Wastes

Wide range of problems

- Small sites to very large sites
- Low activity to high activity
- Other issues such as chemical contamination
- Some sites in urban areas

Gaps in Knowledge

Detailed reports on industries and contaminated sites available for EU countries

Some information for South America, former Soviet Union countries, India, China, USA

Very little information for Africa, Central America and Asia

Models

RESRAD – suite of models, available on internet

CLRP

DOSDIM

OLENRAD-A

RISKOLEN

TAMDYN

These models have been used in an intercomparison exercise (not by us)

Some are dynamic models – some are equilibrium models

Models (continued)

None of the models on the list appear to address the issue of decay chain calculations

Only one of the models (RESRAD) is readily available (via the internet)

Meetings

We had hoped to organise a working group meeting in
Damascus – this did not eventuate

Reporting

There has been some preliminary work done

This needs to be discussed in detail at this meeting

The way forward?

We have to be aware of the practical point that in many countries there are other more important issues

Therefore we need to find a simple, effective, acceptable set of tools/procedures for handling NORM waste issues