

EMRAS – NORM WG

Vienna, November 2005

Steady progress to date after a slow start

Compiled a list of NORM producing industries

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

Three hypothetical scenarios

- Point source
- Area source
- Area source + river

Preliminary look at some possible real scenarios

- Former gas mantle manufacturing plant – urban

A start has been made on compiling a bibliography of NORM and modelling of NORM in the environment

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

There is very little standardisation between countries with respect to NORM

Legacy Wastes

Wide range of problems

- Small sites to very large sites
- Very wide range of site characteristics
- Low activity to high activity
- Other issues such as chemical contamination
- Some sites in urban areas
- Sites not generally established with monitoring or modelling requirements in mind – not easy to find (good) data sets that have been validated

Models

RESRAD – suite of models, available on internet

CLRP

DOSDIM

OLENRAD-A

RISKOLEN

TAMDYN

.....

Not many of these models are readily available for general use

Other models/modelling packages (e.g. AMBER) are available, but need careful evaluation

Meetings

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

The WG had a meeting in Seville in May 2005

- this meeting was well attended and considerable progress was made, particularly in the development of the hypothetical scenarios
- a highlight of the visit was a site visit to a fertiliser production plant in Huelva, and an inspection of the phosphogypsum disposal site at the confluence of the Rio Tinto and the Rio Odiel
- several presentations were made on the work done at the Huelva site

Reporting

There has been some preliminary work done – a draft outline report has been prepared

This report is useful in that it indicates where the gaps are in the work done so far