EMRAS

Working Group on remediation assessment for urban areas contaminated with dispersed radionuclides

Minutes of the 1st Working Group Meeting

IAEA Headquarters, Vienna, 1st-5th September 2003

At its first meeting, the Urban Remediation Working Group discussed and clarified its objective:

> Testing and improving the prediction of dose rates and cumulative doses to humans for urban areas contaminated with dispersed radionuclides, including
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> - Prediction of changes in radionuclide concentrations or dose rates as a function of location, time, and surfaces;
> - Identification of the most important pathways for human exposure; and
> - Prediction of the reduction in radionuclide concentrations or dose rates expected to result from various countermeasures or remediation efforts.

The general approach of the WG will be the characterization of representative situations and relevant processes, review of existing modelling approaches, development of an initial modelling scenario, characterization of remediation methods and corresponding modelling approaches, and development of additional modelling scenarios. Much of the discussion during the meeting was on the types of situations and processes that should be included, or at least considered for inclusion, in a model for urban contamination, including the types of urban areas (e.g., suburban area, small town, single square of a large city, large city); processes for redistribution of contamination; locations, surfaces, and temporal factors; and exposure pathways and human behaviour patterns. The review of existing modelling approaches will consist largely of collection and distribution of references (in progress), discussion within the Working Group at its next meeting, and identification of modelling needs (e.g., approaches for handling tall buildings).

An initial modelling scenario is planned, based on Chernobyl data for three Ukrainian towns: Pripyat, which was evacuated soon after the Chernobyl accident and has remained essentially uninhabited; Polesskoe, which has remained inhabited after the accident; and Slavutich, which was built after the accident on contaminated land. This set of towns will provide an opportunity for WG participants to compare differences in redistribution processes and exposure situations for the same initial contamination event. The modelling scenario will be addressed first without consideration of remediation efforts, and then including the effects of remediation efforts. To the extent possible, additional modelling scenarios will be developed later to address important issues not included in this first scenario.

The initial modelling scenario will be distributed at (or if possible, prior to) the next WG meeting, which is provisionally scheduled for 21-23 April 2004 in Vienna. This meeting will provide opportunity for discussion of the modelling scenario, existing modelling approaches and remaining needs, and additional scenarios that would be useful to the group. The next meeting of the WG, scheduled for 11-15 October 2004 in conjunction with the EMRAS plenary meeting, will include discussion of initial modelling results.