

## PFAS Site Investigations: Danish Guidelines

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**Background/Objectives.** Pollution with PFAS is widespread and there is a growing concern with respect to the extent and scope of activities required when investigating soil and groundwater pollution at sites where PFAS have been used. The Danish Regions have therefore initiated the preparation of a handbook on soil investigations and remedial actions at sites polluted with PFAS. The handbook establishes guidelines for conceptual site models and for preliminary and supplementary site investigations and provides an overview and status for remedial methods.

**Approach/Activities.** The handbook is based on a review of available data on PFAS composition, characteristics, sources and environmental fate. Analytical possibilities will also be reviewed in order to assess whether the current national program for analysis of soil and groundwater samples is adequate – it currently includes 12 PFAS. The review includes a status of findings of PFAS in soil, groundwater, surface water and biota in Scandinavia.

**Results/Lessons Learned.** Following the review, a conceptual mode for transport and mobility of PFAS in soil, groundwater and surface water is set up for hot-spot sources, unidentified sources at landfills and diffuse sources. The conceptual site models form the basis for elaborating strategies for preliminary and supplementary site investigations depending on the source of PFAS and for risk assessment. These models will also be used to describe different investigative techniques relevant for assessing the extent of pollution, flux in groundwater plumes etc. Moreover an analytical program with up to 30 PFAS has been proposed depending on the site activities, Technological status for remedial methods have been reviewed and assessed. Furthermore, the handbook describes pitfalls and gives advice on successful investigative and remedial approaches.

The handbook is expected to be published in October/november 2017. We will present the findings of the review, analytical possibilities and proposal for PFAS to be included in the national analytical program, conceptual site models, investigative methods and proposed scope and status for remedial methods.