

Postdoctoral researcher

“Biogeochemistry of pollutants and modelling: application to the transfer of PCBs between sediment and the water column”

BRGM (French Geological Survey) (www.brgm.fr) is France's leading public institution involved in Earth Sciences applications for the sustainable management of natural resources and surface and subsurface risks. It applies its expertise to meeting two major objectives: understanding geological phenomena and developing the necessary tools for managing the soil, sub-soil and natural resources.

Within the scope of its research activities linked to the management of contaminated sediments, BRGM wishes to build on its scientific and technical know-how in the field of modelling the behaviour of pollutants within this matrix. It is therefore recruiting a postdoctoral researcher for 12 months to participate in a project involving the transfer of PCBs between sediment and the water column. The major objective will be the development of a mechanistic model, based on metre-scale laboratory experiments, aiming to describe the levels of dissolved and/or particulate PCBs in the water column as a function of time after sediment suspension and settling. The post, based in Orleans (1h train from Paris, Loire castles, Sologne forest....) within BRGM's Environment and Innovative Processes Division, will be vacant **as of the 1st April 2011**.

The successful candidate will either have a PhD in geochemistry in the environmental field (water, soil or sediment) and have good modelling skills enabling the description of exchanges of organic contaminants between solid and aqueous phases, or a PhD with a strong emphasis towards modelling applied to experimental geochemical results.

Responsibilities:

- Modelling the results obtained on the basis of existing models in order to elaborate an appropriate tool for elucidating the mechanisms involved (estimation of time spent: 60 %).
- Participating in carrying out laboratory experiments dedicated to the understanding and the control of biogeochemical processes involved in the transfer of pollutants from sediments to the water column (estimation of time spent: 10 %).
- Conceiving and carrying out experiments in parallel with a view to discussing working hypotheses and acquiring indispensable parameters for modelling (estimation of time spent: 15 %).
- Promoting and communicating results (written and oral communications, scientific publications) (estimation of time spent: 15 %).

Necessary skills:

- Good knowledge and experience of the models available for the description of such phenomena.
- Experimental rigour.
- Sound knowledge of the natural and particularly physical-chemical mechanisms capable of interfering in the transfer of pollutants in natural matrices.
- Good command of English (written, spoken and reading).
- Good interpersonal skills.

The gross remuneration will be around 32 k€ (paid over 13 months).

Please send your up-to-date CV and a covering letter with a résumé of your work or thesis and your professional references **before February 28** to:

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