

Curriculum Vitae

Andrew Baker

Qualifications and Professional Affiliations

DPhil, Geology and Geochemistry, University of Oxford (1985)

MA Natural Sciences (2:1), University of Cambridge, (1981), specialising in geology and geochemistry

Fellow of the Geological Society of London

Member of the Nuclear Institute

Key Areas of Experience

Management, technical co-ordination and technical contributions to safety cases and research programmes;

Radioactive waste management and disposal;

Options appraisal;

Environmental regulation;

Geology and geochemistry.

Selection of Experience

Andy Baker Consulting Ltd. (2007/2009)

Independent Consultant, radioactive waste management and disposal

Contract to provide technical management and integration for the Environmental Safety Case at the Low-Level Waste Repository. Lead author and manager of a major submission to the regulator.

Development of an Environmental Safety Case for VLLW disposal at a UK landfill site.

Support to the Nuclear Decommissioning Authority in documenting the post-closure safety case for a generic deep geological repository and in managing the biosphere and geosphere research programmes (working with Serco).

Lead Member of the Peer Review Panel for Sellafield Contaminated Land.

Support to the Environment Agency in identifying key technical issues that would require consideration for deep repositories in different geological environments.

Consultant to the IAEA on the PRISM project and Member of the Steering Group, a successor to the ASAM project and oriented towards the use of Safety Cases in managing repositories.

Environment Agency (2004 to 2007)
Manager of the Nuclear Waste Assessment Team

Manager of a national team providing technical advice on radioactive waste management and radioactive waste disposal within the Environment Agency. Responsibilities included:

Technical Review of the Nirex (now NDA) programme, including major reviews on inventory, concept viability, R & D programme and the Letter of Compliance process;

Contributions to the development of government policy: support to the CoRWM committee, support to the 'Managing Radioactive Waste Safely' Implementation project and member of the government review panel on siting criteria for a deep geological repository;

Implementation of new Joint Regulatory arrangements for ILW conditioning and ILW management strategy and development of corresponding regulatory guidance;

Review of waste management strategies and plans on a number of nuclear sites;

Manager responsible for the technical review of the Low Level Waste Repository Post-closure Safety Case and review of other safety cases for existing or proposed on-site disposal facilities and radioactively contaminated land;

Review and contributions to a number of major BPEOs;

Management of external contracts for technical support;

Member of the team responsible for managing the update of the Guidance on Requirements for Authorisation, the UK guidance for radioactive waste disposal;

Member of the NEA Integration Group for the Safety Case (international technical group on repository safety assessments).

**AEA Technology and Serco Assurance (1990 to 2004)
Consultant and Technical Manager**

Management of Repository Safety Cases and Supporting Research

I have been managed and/or made major technical contributions to the following projects:

Manager of and technical contributor to the Nirex 95 and Nirex 97 (and other) Post-closure Safety Assessments undertaken by AEA Technology for the deep repository at Sellafield;

Manager of two European Commission projects to develop safety cases and remediation proposals for the Hungarian national repository at Püspökszilágy;

Management of the Nirex Geosphere Research Programme in support of deep geological disposal in the UK;

Management of a large European Commission project to review Russian plans for the management of radioactive wastes in NW Russia;

Development of Radioactive Waste Disposal Regulations for the Ukraine and the delivery of corresponding training;

Development of a safety assessment and waste acceptance criteria for the Australian National Repository.

Technical projects in radioactive waste disposal

I have made significant technical contributions to the following example projects:

Natural Analogue Project on the Alligator Rivers Uranium Ore Deposit in Australia;

Development of the Nirex approach to Human Intrusion and the impacts of natural processes;

Member of an international NEA team that discussed and developed approaches to the treatment of human intrusion;

Synthesis and review of R & D on alkaline fluid-rock interactions including authorship of a technical report for Nirex and participation in the European Commission Ecoclay II Project.;

Various projects on options appraisal and safety assessment of the UKAEA Dounreay Pits, Silo and Shaft;

Review of the Safety Case for the Yucca Mountain Repository on behalf of the State of Nevada;

Study of the deep injection of liquid radioactive wastes in Siberia as an anthropogenic analogue;

Regulatory support projects in Latvia and Bulgaria;

Numerous projects in the areas of hydrogeology, contaminant transport and safety assessment in support of the Nirex assessment programme;

Support to Nirex during the RCF Public Inquiry;

An assessment of chemotoxic impacts of the Nirex repository;

Other technical contributions to repository and waste management projects in Russia, Ukraine, Bulgaria, the Czech Republic, Slovakia, Hungary and the UK.

Training

Lecturer on a waste disposal Training Course in Taiwan;

Lecture or organiser on a number of IAEA radioactive waste disposal courses in Central and Eastern Europe, participant in IAEA missions to this area.

Options Appraisal

BPEO for PCM at AWE Aldermaston;

BPEO for liquid discharges at Devonport Dockyard (possible construction of a pipeline);

BPEO for radioactively contaminated land at Berkeley;

Various BPEOs for waste storage and disposal facilities at Dounreay.

Management and Business Development

Manager of a team of up to a dozen staff;

Manager of projects involving up to 30 technical staff;

Lead responsibility for developing business in the radioactive waste management and radioactive waste disposal business areas.

**Natural Environment Research Council (1989 to 1990)
Committee Secretary**

Secretary to a committee that awarded research grants and research studentships to UK universities in the Earth Sciences.

Research Fellowships at the University of Edinburgh (1985 to 1989)

Two research fellowships on fluid-rock interactions and stable isotope geochemistry.

Publications

Many publications in scientific journals in the geological and geochemical field, including Nature and the New Scientist;

Reports relating to the projects listed above, including acting as one of the lead authors on Nirex 95 and Nirex 97.

Authorship of a number of Environment Agency reports on the Nirex programme, the LLWR Overview Report and reports for CoRWM.

Many publications in the areas above related to presentations at international conferences.

Personal Information

Nationality : British

Date of Birth: 1960

Holder of UK full driving licence

Languages: Fluent French and basic Russian