

**Statement of Work  
University of Bristol  
March 19, 2001**

Professor's R.S.J. Spark's and A.W. Woods will attend and participate in a meeting in Washington D.C. with staff from the U.S. Nuclear Regulatory Commission and the Center for Nuclear Waste Regulatory Analyses. The goal of this meeting will be to discuss a paper that Professors Sparks and Woods have prepared about the consequences of magmatic activity at the proposed Yucca Mountain high-level radioactive waste repository. Airfare and per diem related to travel to the meeting and hourly salary at a rate of \_\_\_\_\_ for Prof. Sparks and \_\_\_\_\_ for Prof. Woods will be provided. It is anticipated that Prof. Woods and Sparks will charge only time spent in participating in the meeting including preparation and follow-up activities, not or no more than 40 hrs each.

AGM-K  
6/6/01

Not  
original contract  
dated 10/98 --  
Woods' Rate B

## **SUPPORT FOR SUBCONTRACTOR REQUEST**

**CONSULTANT:** Dr. Robert Stephen John Sparks

**RATE (dollars/hour):**

**PERIOD OF PERFORMANCE:** January 1, 2003 to December 31, 2003

### **STATEMENT OF WORK:**

Dr. Sparks will coordinate University of Bristol investigations on sustained magma flow through subsurface tunnels. He will supervise colleagues in the design and construction of experimental apparatus, develop experiments analogous to basaltic magma flow conditions, and conduct analysis of experimental results. Dr. Sparks also will provide independent expert assistance in the review and analysis of literature relevant to hazards associated with basaltic volcanic processes.

**ESTIMATED UTILIZATION (hours):** 100 hours

### **PRIOR CONTRACTOR WORK EXPERIENCE WITH SWRI:**

Dr. Sparks was a consultant to CNWRA since 1999.

### **PROGRAMMATIC NEED FOR CONTRACTOR WORK:**

This work described above will allow staff to access the phenomenology and consequences associated with the intersection of a vertically rising basaltic magma with horizontal repository drifts and the uncertainty associated with the process

**LIST OF ELIGIBLE CONSULTANTS CONSIDERED:** None

### **RATIONALE FOR SOLE/SINGLE SOURCE SELECTION:**

Dr. Sparks is an internationally known volcanologist who help initially in defining the tasks related to magma-repository interaction.

### **RATIONALE FOR NOT USING SwRI RESOURCES:**

No SwRI resources have been identified that are familiar the aspects of volcanology that are necessary to define and carry out the tasks related to magma - repository interaction.

**PROJECT NUMBER(S):** 20.06002.01.051