

SUPPORT FOR CONSULTANT/SUBCONTRACTOR REQUEST

June 10, 1998

CONSULTANT/SUBCONTRACTOR:

Dr. Peter Baxter

RATIONALE FOR USING AND PROGRAMMATIC IMPACT OF NOT USING CONSULTANT/ SUBCONTRACTOR:

The consequences of volcanism are not well constrained especially in the area of ash inhalation and ash resuspension. Without this work being done the uncertainties on the consequences of volcanism will continue to be large.

STATEMENT OF WORK:

Consultant will work with staff of the IA KTI to review current CNWRA models for ash inhalation and resuspension. Many of the radiological health effects will be governed by the same volcanic processes that govern non-radiological health concerns. The consultant will also work with IA KTI staff to determine the most appropriate methods for measuring ash resuspension on ash blankets and to determine how rapidly fines are elutriated on ash blankets. In addition he will help IA staff prepare a report on this topic which will summarize ash inhalation parameters in a manner appropriate for incorporation in TPA codes. The consultant will also provide input on how individuals in technologically advanced societies behave during large and small volcanic eruptions. An assumption voiced repeatedly is that critical group members will naturally evacuate their homes if a volcano erupts 20 km away, and will stay away for years while the land recovers. It is also assumed that critical group members will wear respirators if suspended or resuspended ash particulate concentrations exceed OSHA indoor particulate limits (10 mg/m³). Dr. Baxter can help assess these assumptions.

LIST OF ELIGIBLE CONSULTANTS/SUBCONTRACTORS CONSIDERED:

None.

RATIONALE FOR SOLE/SINGLE SOURCE SELECTION:

Dr. Baxter has a unique mix of education, i.e., medical doctor, skills, and experience, as demonstrated by his publications.

RATIONALE FOR NOT USING SwRI RESOURCES:

No one at SwRI has the necessary background and experience.

SUPPORT FOR CONSULTANT/SUBCONTRACTOR REQUEST (cont'd)

PROGRAMMATIC IMPACT ON CNWRA WORK:

Without Dr. Baxter's participation the development of the consequences of volcanism will not be as completely developed as possible and the uncertainties will remain high.

RATIONALE FOR RATE(S):

Dr. Baxter is an internationally known medical expert in the field of environmental medicine and has over 125 publications.

Estimated duration/hours: 40 hours

Estimated rate/hour: \$1,000

WORK BREAKDOWN STRUCTURE NUMBER(S):

20-1402-461

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SUPPORT FOR CONTRACTOR REQUEST

CONTRACTOR: Peter Baxter

RATE (dollars/hour):

PERIOD OF PERFORMANCE: 11/1/1999 to 10/31/2000

STATEMENT OF WORK:

Dr. Baxter's primary task will be to review current CNWRA work on ash inhalation and resuspension. The consultant will also advise CNWRA staff on methods for measuring and determination of how rapidly fines are elutriated out of ash blankets. The consultant will continue provide input on individual and societal behavior during volcanic eruptions.

ESTIMATED UTILIZATION (hours):

80 hours

PRIOR CONTRACTOR WORK EXPERIENCE WITH SWRI:

None

PROGRAMMATIC NEED FOR CONTRACTOR WORK:

This work and participation by the consultant will reduce uncertainties in two areas. These are in human behavior during volcanic eruptions and role of ash resuspension.

LIST OF ELIGIBLE CONSULTANTS CONSIDERED:

None with similar education and experience.

RATIONALE FOR SOLE/SINGLE SOURCE SELECTION:

Dr. Baxter has a unique mix of education and experience: i.e., medical with experience in dealing with medical problems associated with volcanic eruptions.

RATIONALE FOR NOT USING SwRI RESOURCES:

Expertise does not exist.

PROJECT NUMBER(S): 20.01402.861