

SUPPORT FOR CONSULTANT REQUEST

January 29, 1998

CONSULTANT: Amvrossios Bagtzoglou

RATIONALE FOR USING AND PROGRAMMATIC IMPACT OF NOT USING CONSULTANT:

This consultancy is established to support the Unsaturated and Saturated Flow Under Isothermal Conditions KTI (20-1402-861) by conducting numerical modeling of groundwater flow and transport and interpreting the results of the calculations. This consultancy may also support work on the Microbial Plugging of Pores and Fractures in Tuff project (20-9998-000).

STATEMENT OF WORK:

This consultancy is established in advance of a detailed statement of work as part of an ongoing effort to maintain a group of pre-approved consultants to enable more responsive CNWRA client support. In general, this consultancy is expected to provide numerical modeling of groundwater flow and transport and interpretations of the results of the calculations.

LIST OF ELIGIBLE CONSULTANTS CONSIDERED:

Other consultants that may be used include: David Woolhiser, David Groeneveld, Dani Or, and Stuart Stothoff.

RATIONALE FOR SOLE/SINGLE SOURCE SELECTION:

Not applicable.

RATIONALE FOR NOT USING SwRI RESOURCES:

No resources exist at SwRI for conducting this scope of work.

PROGRAMMATIC IMPACT ON CNWRA WORK:

This consultancy may support deliverables for the Unsaturated and Saturated Flow Under Isothermal Conditions KTI (20-1402-861) including: Input to Unsaturated and Saturated Flow Under Isothermal Conditions IRSR, Rev. 1 - Unsaturated Zone Topics - Letter Report (IM 1402-861-820) and Input to Unsaturated and Saturated Flow Under Isothermal Conditions IRSR, Rev. 1 - Saturated Zone Topics - Letter Report (IM 1402-861-830).

STATEMENT OF WORK
FOR AMVROSSIOS BAGTZOGLOU

Work for Amvrossios Bagtzoglou will consist of a variety of activities in support of the Isothermal Flow and Thermal Effects on Flow KTIs and other areas of CNWRA work related to hydrology.

Specific activities are anticipated to include:

- finalize and document enhancements to the SUFLAT code
- interpret model results for the formation of perched water zones at Yucca Mountain
- write a journal paper deliverable documenting his modeling and interpretation of the formation of perched water zones at Yucca Mountain
- provide technical input on deep percolation of groundwater at Yucca Mountain
- provide technical input to the evaluation of thermal effects on the formation and persistence of perched water bodies
- provide technical input to the effects of microbial plugging for modeling of non-isothermal flow

Additional activities may be identified in the future.