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426.1/WRK/85/02/04/WM-85037

WM-RES - 1 -
WM Record FEB 0 5 1985 WM Project 10,11,12
A1756
SRL

Dr. Malcolm D. Siegel
Sandia National Laboratories
Division 6431
Albuquerque, NM 87185

Distribution:

Dear Dr. Siegel:

(Return to W/M, 623-SS)

SUBJECT: CONTRACT NO. NRC 50-19-03-01/FIN A-1756, "GEOCHEMICAL SENSITIVITY ANALYSIS"

I have reviewed the December, 1984 monthly progress report for the above contract, dated January 2, 1985. Based on my review of this report, progress to date is satisfactory. I am interested in learning more about the solution for the convective-dispersion-reaction equation you obtained under subtask 1D. Will additional detail be forthcoming soon? I am concerned about the limitations of TRANQL. From what you have written, I interpret the problem to be the fact that a time step and grid size necessary for accurate results makes the code extremely impracticable for use over 10,000 years and 10 km. If this is so, it seems that the problem lies within the transport section of TRANQL. Are there not available transport codes that are efficient with respect to the desired times and distances? Perhaps on such a large scale, TRANQL is too complex for the desired analyses. As it stands now, TRANQL is inappropriate for us, and even an improvement of 1 to 2 orders of magnitude for MINEQL/MICROQL, as suggested by Stanford, may still leave us with a code unsuitable for our purposes. I would like to know your reactions to these concerns. The problems with TRANQL seem to me to have a major impact on this project.

I am sorry this response to you is tardy. We have been devoting almost 100% of our time to EA reviews. Please do not hesitate to call me, however, if the need arises. As you probably already know, funding for FY85 has been increased. I am still working to recover the remainder of the funds originally removed from FY85 for later in the project lifetime. Due to a lack of travel funds, I will not be able to visit you in the near future, as I had hoped.

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PDR WMRES EXISANL
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OFFICE : WMGT : : : : :
NAME : WRKelly;mt : : : : :
DATE : 85/02/ : : : : :
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The action taken by this letter is considered to be within the scope of the current contract FIN A-1756. No changes to costs or delivery of contract products is authorized. Please notify me immediately if you believe this letter would result in changes to costs or delivery of contracted products.

Sincerely,

Original Signed By

Walton R. Kelly
Geochemistry Section
Geotechnical Branch
Division of Waste Management
Office of Nuclear Safety and
Safeguards

OFFICE :	WMGT	:	:	:	:	:	:
NAME :	WRKelly;mt	:	:	:	:	:	:
DATE :	85/02/5	:	:	:	:	:	: